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# BULLETIN
## OF THE
# AMERICAN IRIS SOCIETY

## JUNE, 1936

## NO. 62

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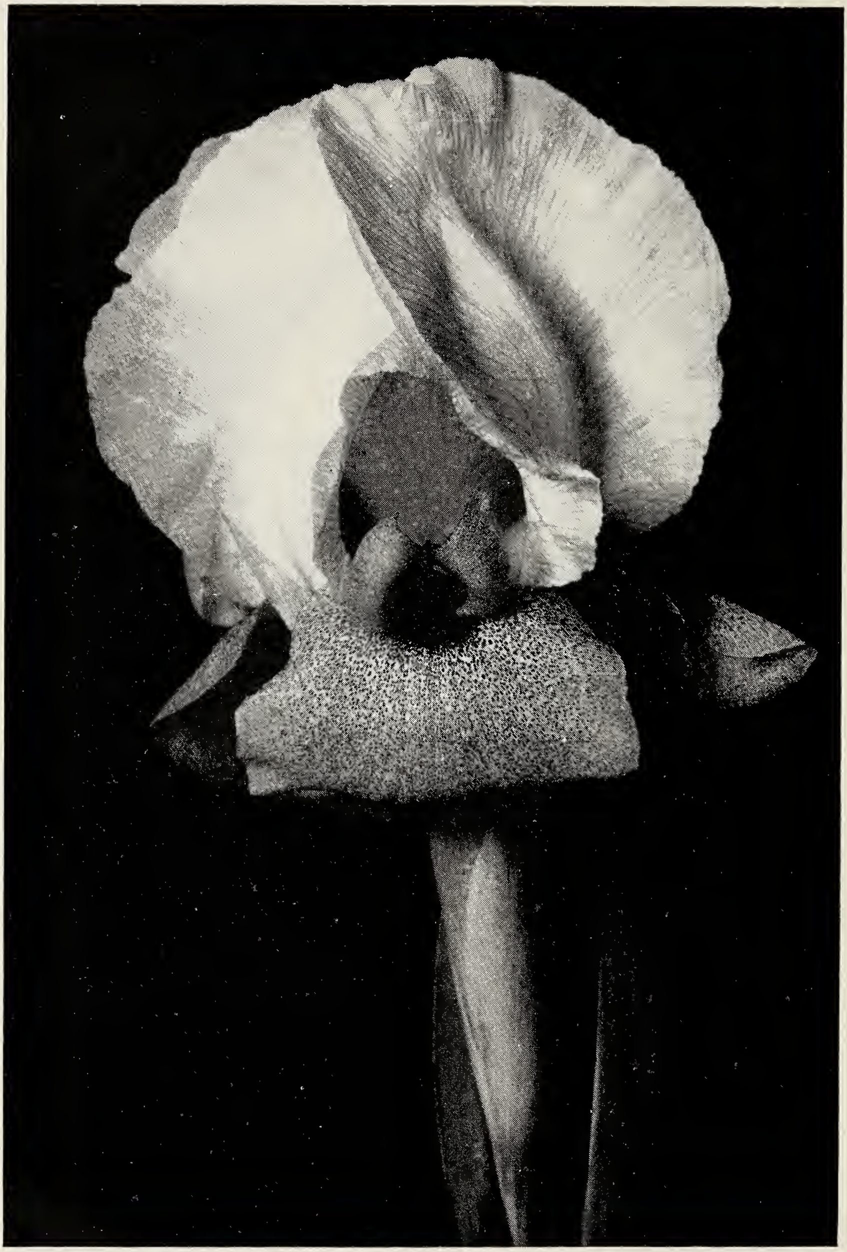
# THE AMERICAN IRIS SOCIETY

## FOREWORD

■ It would be very pleasant to record in this Bulletin a special name or theme, and a special assistant editor who, of course, would have done all the work. This, unfortunately, is not the case and your several thanks must go, as do my own, to those individuals who have contributed. Particular thanks must go to Mr. Robert Schreiner, who wrote the note on the iris resulting from the cross of *urmiensis* and *arenaria,* and gave the root of the cross that was later photographed in bloom in a pot that had been wintered out of doors with only the slightest protection.

Since the Directors have decided that we must return to four Bulletins a year, this issue is dated June, and the next will probably be September. If you would like to see five again, two hundred more members would probably do the trick!

B. Y. Morrison, *Secretary.*



*L. A. Guernsey* [See Page 49]

*Iris Lorteti*

# COLOR

### Walter Timmerman

■ Color is not a potent factor in supplying our daily physical wants. Our sense of taste, smell, hearing and touch cannot receive or translate the messages which the world of color has in store for us. Only through our sense of sight are we able to feel the power color has in our lives and the influence it has on our emotions.

It is well known that the history of man from its infancy must and does recognize the expression and use of color by our ancestors, be it for facial adornment, in their home surroundings or in their fine arts of pottery, weaving or architecture.

All peoples of the earth, whatever their cultural status may be, are without question under the magic spell of this influence. It is felt by most everyone in degree as we are able to "tune in" for proper reception. Most of us are endowed with but very simple receiving sets, and as a consequence the many possible hues, shades, and tints of the spectrum, their values and intensities and their harmonious combinations as found in the ever present polychromatic world we live in, are sealed to us through our inability to fully see, differentiate, classify, judge, analyze or compare.

The realization of these limitations is to some of us an awakening. This awakening leads us to a desire to broaden our understanding. Out of this desire grows our willingness and eagerness to familiarize ourselves by study, research, observation and experimentation with certain proven basic laws of physics and optics and the time tried underlying principles of the laws of pleasing harmonious combinations, tint and tone relationship and the association of contrasting or complementary colors. This study, together with our individual temperaments, moods, sensitivity, emotions, past experiences, personal associations, inherited talents, and environmental influences should lead us from a feeling of uncertainty and bewilderment to a more abundant and permanent enjoyment of the finer color symphonies to which we have access, and to a satisfaction which comes from being able to intelligently distinguish between the savagely crude and the finely balanced color poems, which nature in its many ways, and which the fine arts in their various modes of appeal have in store for us.

Color impressions reach our consciousness through several material ways. We are told, that in our ocular system there are three types of nerve fibers, each endowed with the power to react to a specific section of the spectrum, segregate its part of the color at hand and convey its message to the proper receiving station of our brain. Here the returns are tabulated and we ''see'' a color, which may be red, yellow or blue, a mixture of two or all of these, or any or all mixed with white or black in various proportions. Should this theory not satisfy, we are told that in the retina of our eye there are millions of responsive nerve termini, which in some unexplainable manner are able to discern, select and classify, each in its own way, the color sensations which are focused on them by the lens in the eye. While these so-called cones are doing their work, another set of parts called the rods are busy interpreting the relative intensity of the color as compared to white. Simultaneously they send their findings to the proper brain centers and we are color conscious. We are still mystified when we learn that through the operation of the photoelectric cell and the breaking up of elemental atoms by radium bombardment, the ether which we learned was so necessary for the colored light waves to travel through, is no longer present in the scheme of things. This leaves us to fill our imaginations with the quantum theory, which declares that light is radiant energy, emitted in regular quantities in a discontinuous manner, in much the same way as is electric energy. We now arrive at the point where we are told that color itself has no material existence and has no tangible qualities, but can broadcast sensations only in proportion to the quality and strength of its colored up power energy. From whence this power, we are left to decide for ourselves. Each of these theories has its proofs. With the rapid advances of modern science we may soon expect to hear of a thoroughly consistent, workable and understandable law, which may possibly correlate the salient parts of each.

Regardless of the fact that much is yet to be proven, we are certain of one undisputable fact. This is the actual presence of color and its reactions on our sensibilities. These may be pleasing to us or otherwise, but we cannot help but agree with the psychologists who tell us that color rules our lives and that approximately one half of the knowledge of our surroundings comes to us through our eyes. These complex marvels of nature are rated as being able to see but 20 per cent of known existing colors, just as shrill and very deep sounds are beyond the range of our hearing. Through scientific means we are able to see more, and further research will widen our color vision—a hint of which we have in the infra red photograph. Should this come about, we must prepare ourselves for new thrills, experiences and sensations of regal splendor, of which in our dreaming hours we now but can muse and meditate.

When with our present somewhat limited physical equipment to see color, we try to discover why some tones are more pleasing than others and why some combinations have greater appeal to our sense of harmony, we feel very plainly that behind it all there must be some fundamental facts of color relationship, which are consistent and dependable. With this knowledge at our command we can more directly and more definitely reach conclusions and are better able to apply our findings to our garden problems. The finely balanced, delicately blended, harmoniously grouped and carefully distributed color effects are no longer to us a closed book, but awaken in us a deep regard for the governing Creative Power, and open to us new highways of delight, and we now look at with more than passing interest the colorings of flowers, birds, insects, fish, rocks and leaves, and the colors of the sea, the mountains, the plains, the clouds at dawn and sunset have a new appeal.

When we step into our garden we find that not only the theoretical facts of color are there on all sides, but we find that each part of the day has its own peculiar color haze or veil over all. This depends on many factors; the time of the day, the quality and strength of sunshine, atmospheric moisture, reflections from the sky, the clouds, overhanging trees, nearby buildings or walls, strong or softly filtered shadows cast by topographical undulations, fleeting clouds, trees or shrubs, buildings or other structures. All of these have a somewhat unifying effect, of which we are not conscious, and have little control over, but must bear consideration. When seeking means for unification over which we have some control, we may do as landscape painters do when, in their preliminary studies they search for the proper keynote color.

This is carefully distributed over the whole picture in varying shades and tints, in large and small areas. This, after the details of perspective, composition, balance and lighting are taken care of, is a most important factor contributing to the success of the painting. Decorators and fashion designers have selected appealing paintings and used their color or color notes in room decoration or dress ensembles with marked success. We may do just this with our garden picture, or more directly if we have some idea of basic color relationship, without the intermediate step of the artist's conception as expressed on canvas.

With such a plan in mind, we see distributed over the entire garden a ''key note color.'' This may be achieved by planting at irregular intervals, in not too uniform quantities, recurring patches of irises of the same or similar color. This should be a yellow, light blue, lavender, white or a light tint which we know has good carrying qualities. Probably not over 20 per cent of the total color area should be so covered, so that the planned reason for its being there will be felt, but not strong enough to steal the show, or to create a feeling of motonony. We may carry this a little further by considering the very early and the late bloomers in similar distribution over the same garden, which as the weeks go by will add a renewed interest by a change of the predominating color note. This central major interest may be worked out in the facing of long walks or drives, in the curving bays and promontories of the evergreen and shrub borders, lawn edgings, around pools or rock gardens. Between these uniform color areas, space has been reserved for our iris gems of many kinds and colors. While giving consideration to the virtues of these color gems, we should think of charm, attractiveness, garden value, and personal likes and dislikes and not be solely guided by popularity, high price, glowing descriptions and medals and have only the dashing, sensational, large, coarse, overbalanced, leathery textured specimens, which truly may be masterpieces in every technical way in the eyes of the judge or in the show room, but in full discord in our dream garden of balanced values. To guard a possible monotony, we must include the columbine, pyrethrum, day lilies, pink oriental poppies and others which bloom at this time.

In planning and developing this garden we will be confronted with the technique of the thing. We will think of soil tests, exposure, drainage, fertilizer, stakes, labels, root rot, borer, weeds, water, sunburn, perspiration, costs of plants and labor, winter protection and other items and before we realize we lose sight of the fact that our garden should mean more to us than a mass of material things. In proportion as we put part of ourselves into the project, so will our income be, not directly measurable on the basis of the value of gold per ounce, but in the awakening of our inner sensibilities of the finer things of nature and when the open road, the niblik, the racquet or the beach beckon us, we will be content to linger, absorb and quietly listen and be refreshed, and feel the soothing effect on our daily business and social disappointments.

As we grow more intimate with our irises, we find that there are a number of color combinations which will be satisfactory. The most common is the combination of the blues, violets and purples with the various hues of yellow and orange. On still closer observation we find the color effect as viewed from a distance is made up really of a number of colors, not any of which is as pure as the basic colors of the spectrum. In the blues we see hints of red or purple; in the yellows, hints of red or green; in the whites, flushes or hints of any or all of these. These elemental coloring matters have been carefully studied by botanists and chemists. They tell us that there is in solution in the cell sap and that it flows with it, a substance called the anthocyans. This in acid conditions is red, and in alkali is blue, and respectfully called erythrophyll and cyanophyll. Green, which in botanic circles is not considered a real color, colors being only considered such when different than green, derives its color from chrophyll. This is not soluble as the aforementioned substances, but are plastids, which are bound up and are a part of the cell structure itself. The yellows have in their make-up the plastids known as carotin and xanthophyll. It has been noted that both the sap solution and the plastids permeate the entire structure of the plant, including the foliage and flowers. This is evident when we observe that in our yellow irises there is a tendency toward yellow green foliage and in the blues and purples the tendency is toward blue green foliage, and a strong tendency toward red when viewed through a glass, calculated to filter out all other colors. This red glass, when used on an assorted variety of irises, quickly singles out those in which there is present red in any amount, including the true pink for which we are waiting. This may give us a clue to follow when on the trail of the real spectrum red iris, which when it arrives, will supersede from a standpoint of color nomenclature all those falsely, wrongly named ''red'' iris, introduced by enthusiastic hybridizers, whose knowledge of color has not kept pace with their other fine achievements, and who have unknowingly created a muddled situation, which will grow more acute as the years go by, as far as the records and descriptions of our society are concerned.

Beyond the color characteristics governed by the chemical make up, the color effect of a flower is influenced by a number of structural qualities. We find that as we go into detail that smooth, enameled like surfaces reflect in noticeable degree more of the adjacent hues than the more ruffled or crinkled ones. In the crinkled ones, only the upper ridges reflect the light and this sounds its predominating color note, while in the valleys and depressions, much of the light is reflected back and forth from side to side and reaches us in a somewhat darker tone than the reflected color of the ridges, and a slight tendency toward one of the adjacent colors of the color wheel. The velvety surfaces are somewhat darkened in tone by the, one might say, shadows between the many very fine textural highlighted peaks. In all these various surface characteristics, we can generally find a predominant hue. This is supplemented by secondary blendings of other tints, which may or may not strongly affect the general color, but which somewhat unconsciously may be the correlating factor for linking together iris colors, which strictly are not in friendly relation, into a happy and harmonious relationship. The surface textural characteristics are modified and influenced in various degrees by translucency, transparency, iridescence, frostiness, luminosity, intensity or weight of color and warmth. All of these have powers, capable of materially influencing the total color effect.

In reconsideration of all the elements which enter the final analysis of an individual iris bloom or a well balanced garden, we cannot help but feel the complexity of the problem, and for those inclined to study and research there is in store, a feeling of exalted thrill, a renewed reverence for the myriads of minute details in our natural surroundings, and measurable reduction in size of that selfish thing called ''I.''

As the seasons advance and the time again arrives when we look out of our window at the dark leafless tree trunks and branches silhouetted against the gray sky, out of which is softly falling a protecting blanket of white over our summer's garden activities, we dream and speculate in anticipation of the next season's color parade, and we are happy with the coveted memories of adventures in a land of color, whose language we are now better able to understand and interpret.

*Kansas City, Kansas.*

# HYBRIDS OF IRIS LAEVIGATA WITH I. VERSICOLOR AND I. VIRGINICA

### George M. Reed

■ The three species, *Iris laevigata, I. versicolor,* and *I. virginica,* are closely related, evidently belonging to the same section of the *Iris* genus. They are all moisture loving plants, thriving in marshes and along the margin of streams. *I. laevigata* is found in Eastern Siberia, Northern China, and Japan. *I. versicolor* and *I. virginica* are the Blue Flags of Eastern North America. These two species have been greatly confused in the past, and their exact range is not definitely known. The former is very common in Northeastern United States, extending south to Virginia. Formerly it was assumed to extend throughout most of the Mississippi Valley, but recent studies indicate that it is confined to the northern portion of this region. *I. virginica* extends along the coast of the Atlantic from Virginia southward. It is also found in the Gulf States and in most of the Mississippi Valley region.

*Iris laevigata.* This iris has robust rhizomes up to 6 inches or more in length and ¾ inch in diameter. The leaves are a foot and a half to 2 feet long, an inch or more broad, smooth, without a well defined midrib, and pale greenish yellow. The flower stem is as much as 2½ feet long, rising at an angle from the rhizome and curving upward, with four or more leafly bracts, unusually unbranched and bearing a single cluster of two to three, rarely more, flowers. The flowers are large, with good substance. The blade of the falls is 2½ inches long by 1¾ inches wide, sharply recurved at its attachment to the claw, the latter being 1 inch long by ⅜ inch wide, narrowing towards the base. The standards are erect, oblanceolate, 2½ inches long by ⅝ inch wide. The style branches are 1½ inches long by ½ inch wide at the base of the crests, narrowing toward the point of attachment. The crests are very conspicuous, being erect and about ¾ inch long.

The mature pods are somewhat rounded triangular, about 1 inch in diameter and sometimes as much as 2¾ inches long. The seeds are rather thin, flat, and usually D-shaped. The seed coat is slightly pitted, shiny, varying in color from tan to darker shades depending upon the amount of weathering. The seeds mature early, being ripe around the first part of August. In size, shape and color, the seeds are very similar to those of *Iris versicolor.*

The color of the flower varies greatly. In the common type the falls are royal purple with a bluer tone surrounding the pale yellow area at their base. The standards and crests are slightly lighter tones; the style branches are darker violet-purple. Among seedlings, however, there is a good deal of variation. In some the falls and the standards are distinctly red-purple; in other clones the blue tones predominate; in fact, certain varieties possess the bluest flowers found in the *Iris* genus.

The Japanese name of the iris is Kakitsubata, and it has been in cultivation in Japan for many centuries, with the result that many varieties have been developed and named. It is commonly found in the temple and private landscape gardens, bordering the streams or ponds. The usual blue-purple type is also extensively used in the flower arrangement, to which it admirably lends itself.

Quite distinct from the common type is the variety *albo-purpurea,* first described by Baker, but undoubtedly long known in Japan under the name Washi-no-o. There are, however, marked differences among seedlings which may be grouped under the general term *albo-purpurea.* Some are very pale, lightly spotted with blue-violet; others are deeply colored with blue or red-purple, leaving only a definite white margin. White varieties are also known, but in most of these the standards and falls have some color at their base. Double flowered types also occur. In these, the standards have become enlarged and have the same general shape and position as the falls. A common double flowered variety has the characteristic markings of *albo-purpurea;* the variety *caerulea,* which is very pale grey sky-blue, has long been in cultivation. Double flowered white varieties are also known.

*Iris versicolor.* This species has rather broad, moderately stiff green leaves. The stems are weak, more or less reclining rather than erect, and somewhat longer than the leaves. The stem branches extensively, so that a large number of flower clusters are borne on one main stalk. The flowers are small, with the falls extending horizontally or more or less reflexed. The standards are much shorter than the falls, lanceolate in shape and, instead of rising vertically, incline outward. The color of the flower varies in different clones. It is usually some shade of pale blue-purple. Plants with distinct red-purple, as well as albino forms, are known. There is a distinct white zone at the base of the fall surrounding a yellow blotch.

The pods are rather narrow, more or less triangular, 1½ to 2½ inches long. The seeds are usually in two rows in each chamber, D-shaped, flat, thin, with a shiny and regularly pitted outer layer.

*Iris virginica.* This species is very similar to *Iris versicolor* in its main characteristics. In general, it is a more robust plant with thicker rhizomes, longer and wider leaves, larger flowers, capsules, and seeds. The flower stem is somewhat less branched. The standards are ovate spatulate, nearly as long as the falls. Both the falls and standards are somewhat wavy, pale bluish purple in color, with a distinct yellow blotch at the base of the fall. The whitish zone of *I. versicolor* is not so well marked.

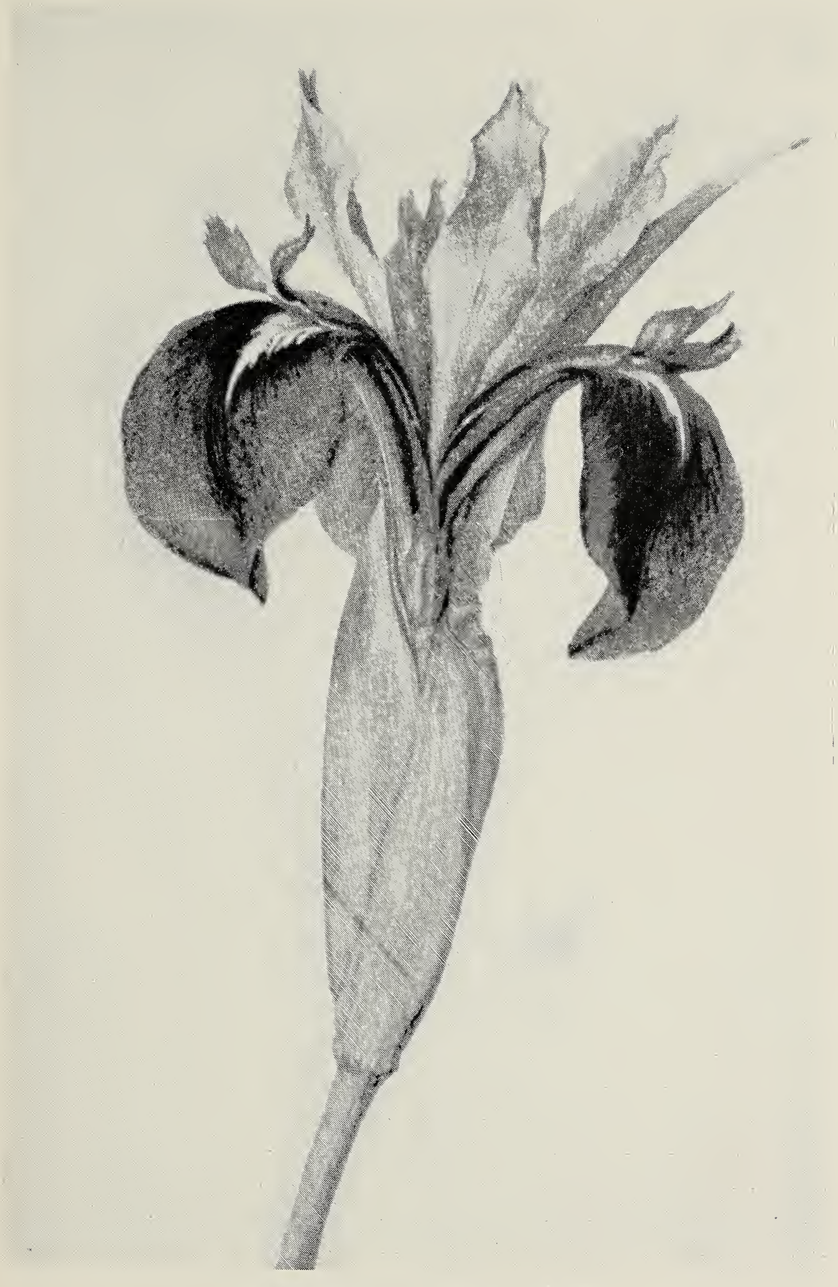
The capsules are long and rather slender. The seeds usually occur in one row, and are rather large, rounded or sometimes D-shaped, with a thick corky wall, and dull appearance.

*Iris virginica* has a very wide range and variation occurs in clones from different localities. Plants sent from Florida by Prof. H. H. Hume are quite different from those obtained in the Central Mississippi Valley.

No improvement of these two species as garden plants, comparable to that of *Iris laevigata,* has taken place. A few garden varieties of *I. versicolor* have been developed, of which the variety *kermesina,* with red-purple flowers, has long been known. In recent years some additional varieties have been developed in England but, for the most part, they are only minor color variations.

*Hybrids of Iris versicolor and I. laevigata.* During the past few years a number of attempts have been made to obtain crosses between these two species. In some experiments *Iris versicolor* and in others, *I. laevigata,* has been used as the female parent. The only successful crosses have been obtained by the use of *I. versicolor* as the female parent and *I. laevigata* as the male.

The plants resulting from this cross are more vigorous in their vegetative characters than either of the parents. In most respects, however, they resemble the female parent more closely than the male. The leaves are somewhat broader, longer and



*Iris laevigata x I. virginica*

stiffer than those of *I. versicolor.* The stem is rather long, weak, and only partially erect. It branches repeatedly, so that many flowers in clusters of two or more are borne at the ends of the branches. The flowers are rather small, about the size of the usual flower of *I. versicolor,* and the shape and arrangement of the parts is also similar to the latter. The standards, however, are somewhat larger in proportion. The color is a deep rich blue-purple. Other variations, in color especially, would doubtless be obtained if the crosses were made between other clones of *I. laevigata* and *I. versicolor.*

The hybrid plants have proved to be completely sterile. Usually the ovary, following pollination, has grown to some extent, but only abortive seeds have been formed.

The hybrids might be described as more robust or vigorous types of *I. versicolor,* with an improvement in the substance and color of the flowers. However, they are distinctly inferior to *I. laevigata* in the flower characters, although they have the advantage of producing many more flowers on the branching stems and possessing more vegetative vigor.

*Hybrids of Iris virginica and I. laevigata.* Successful crosses were secured between these two species, in which *Iris virginica* was used as the female parent and *I. laevigata* as the male. Vegetatively the hybrids show a very marked increase in vigor. The leaves are broad and long, not quite so stiff as in *I. virginica* nor as drooping as in *I. laevigata.* The stems are weak, branching repeatedly, each one bearing a cluster of terminal flowers. The bracts are large and resemble closely those of *I. laevigata.* The flowers are much larger than those of *I. virginica,* but smaller than those of *I. laevigata,* and in general shape and position of parts resemble the latter. The falls are 1¼ inches wide by 2½ inches long, the claw being about 1 inch long. The standards are about 2 inches long by ⅝ inch wide and somewhat wavy. The crests are fairly large and somewhat erect. The falls show the characteristic recurring habit of *I. laevigata.* There is a conspicuous yellow blotch at the base of the falls. The color of the latter is a rich violet, while that of the standards is a pale blue-violet. The color of the freshly opened flowers fades out in the sunlight to lighter tones of violet. Except for some reduction in size, the flower strongly suggests that of the *I. laevigata* parent.

Most of the flowers are sterile, only abortive seeds being produced in the partially developed capsules. Many attempts have been made to self the flowers and also back-cross with the two parental species. However, only a very few good seeds have been formed, some of which have germinated, giving rise to new plants.

The flowers of the hybrid plants are not the equal of those of the *Iris laevigata* parent. However, the plants are vigorous, the flower stem branches and bears several clusters of flowers which have good substance and, although fading out to some extent in the sun, they still retain a good color. Exceptional vigor in the vegetative parts is a distinct advantage over the *I. laevigata* parent.

*Hybrids of Iris versicolor and I. virginica.* Crosses have been made between these two iris species. Dr. Edgar Anderson (Annals Mo. Bot. Gard. 15:241-332. 1928) has described *Iris robusta,* which is a hybrid of *I. versicolor* X *I. virginica.* He has also reported the occurrence of natural hybrids in the wild. We have also succeeded in crossing these two species, using *I. virginica* as the female parent. There is a good deal of fertility in our hybrids, although seed production is not as abundant as in either of the parental species. The plants, however, show much more vigorous growth and development than either parental species. The flower stems branch out extensively, bearing more numerous terminal clusters of flowers. As garden plants they are certainly improvements over either of the two original parental clones.

*Comparisons between the three species, together with other iris.* These three species, *Iris laevigata, I. versicolor,* and *I. virginica,* have many points in common. They are all characteristic marsh plants, thriving in wet situations. Their seeds are very similar and adapted for wide distribution by water. The resemblances in the main characters are much greater between *I. versicolor* and *I. virginica* than between either of these and *I. laevigata.* The fact that hybrids have been obtained between *I. laevigata* and *I. versicolor, I. laevigata* and *I. virginica,* and *I. versicolor* and *I. virginica,* is another evidence of their close affinities. It is interesting to note that the hybrids between the two latter species are much more fertile than the others.

Dr. Charles Peter Thunberg was one of the early collectors of *Iris laevigata,* having observed it during his stay in Japan during 1776-1777. In his account of Japanese plants, in 1784, he described it under the name of *I. versicolor*. Doubtless he was not particularly familiar with this American species, but it is interesting that he identified his collection of the Japanese plant with it.

Dykes, in his Genus Iris, did not attempt to distinguish between *Iris versicolor* and *I. virginica*. Under the former name, he grouped the plants, with *I. laevigata*, in the same section of the Apogons, namely, the Laevigata group, including in this section, however, two additional species, *I. pseudacorus* and *I. Kaempferi*.

*Iris pseudacorus* differs from the three species just mentioned in a number of important characteristics. In every way it is a much larger plant with tall, rather stiff, leaves with a marked midrib. The flower, of course, is very different in color. The seeds, however, resemble somewhat closely those of *I. laevigata* or *I. versicolor*, being somewhat larger and more circular in outline. It is also a characteristic water iris, thriving best in marshes and running streams.

Miss M. Louise Sawyer (Proc. Ia. Acad. Sci. 26:363, 364, 1919; Bot. Gaz. 79:60-72, 1925) has described her experiments in attempting crosses between *Iris versicolor* and *I. pseudacorus*. When *I. pseudacorus* was used as the female parent the ovaries, following pollination, enlarged for some days, but produced only abortive seeds. It is stated, however, than when *I. versicolor* was used as the female parent, fully developed seeds were produced. The latter, however, were not germinated, and the question may be raised as to whether these seeds actually resulted from cross-pollination.

The Japanese Hana-shōbu, *Iris ensata* (*I. Kaempferi**), in its vegetative characters, shows a close resemblance to *I. pseudacorus*, differing markedly from *I. laevigata* and the other species. The leaves are stiff, erect, with a conspicuous midrib. The flower stem is also erect. The seeds, however, are very distinct, being thin, flat, circular in outline with a sterile marginal edge. Hana-shōbu is not a typical swamp plant. It naturally grows in moist situations where the roots do not have to penetrate very deeply before reaching water. The Japanese have developed a large number of varieties and cultivate them in depressed beds flooded with water during the growing season. They thrive, however, under ordinary cultural conditions.

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* According to Dr. G. Koidzumi (Tokyo Bot. Mag. 39:300. 1925), the correct scientific name of Hana-shobu is *Iris ensata* Thunb., and the plant that for so many years has masqueraded under this name is correctly called *I. biglumis* Vahl. Accounts and photographs of the latter iris have appeared in recent Bulletins of the American Iris Society under its incorrect name—*I. ensata*.

Apparently Baker (Gard. Chron. 6:324), in 1876, is responsible for the error in misapplying the name *ensata*. Dykes, in his Handbook on Garden Irises, remarks that he is uncertain as to what character this iris owes its name of "sword-like," a description which is extremely applicable to the leaves of Hana-shobu.

We have made many attempts to cross *Iris laevigata* with *I. ensata,* but so far no hybrids have been secured whether *I. laevigata* or *I. ensata* was used as the female parent. In most cases there was a slight enlargement of the ovary, extending even to the formation of abortive seeds. In rare cases fairly well developed seeds have resulted, but these were without viable contents and no germination has been secured.

It is a matter of common belief that *Iris laevigata* is one of the ancestors of the garden forms of Hana-shōbu. At the present time, however, there is no evidence that these two wild species have ever been hybridized. The facts, on the contrary, indicate that the garden forms of Hana-shōbu have been derived from the wild types which, in different localities in Japan, show marked variation in the size of foliage and stem, as well as in the color of the flowers. These results have an interesting bearing on the relation between these iris species. Undoubtedly *Iris laevigata, I. versicolor,* and *I. virginica,* form a closely related group. *I. pseudacorus* and *I. ensata* certainly differ in both morphological and physiological characteristics from the above species, as well as from each other.

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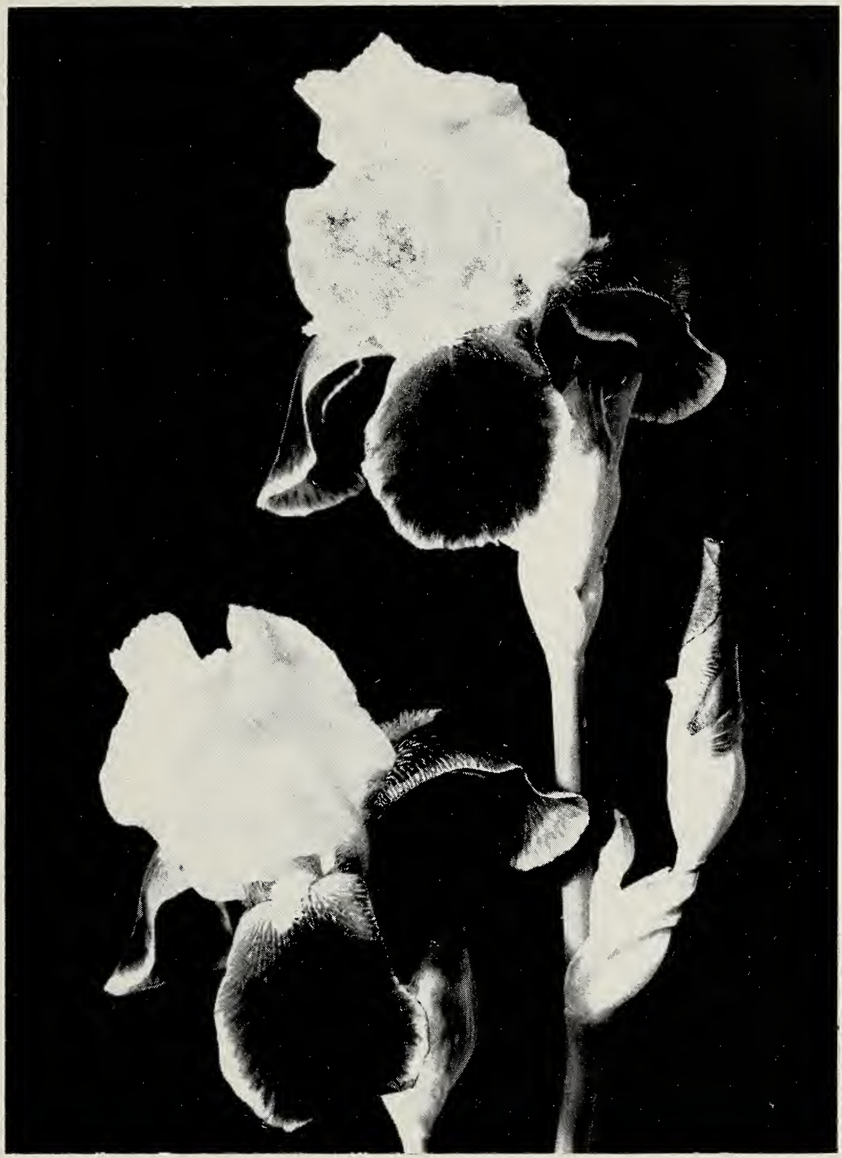
# A GLADIOLUS FANCIER DISCOVERS THE WORLD OF IRIS

### Ralph Baerman

■ Probably few people filled with a generalized love of flowers have ever had the opportunity of standing on a peak in Darien, as it were, and viewing for the first time all the wide expanse of some particularly great and beautiful part of the floral world. Most of us have to take our thrills in more moderate doses—some each year, as we are able to acquire new beauties for our garden or as opportunity presents itself for attendance at the flower shows. It was by this gradual course that the writer was inducted into his own world of the gladiolus, where eventually hobby became business and a few varieties became a thousand. Later hybridizing was begun in an extensive way and up to 40,000 gladiolus seedlings bloomed in a single season. Meanwhile, as the years went by, the writer's interest in iris, originally as lively as his interest in glads, lapsed by necessity into a quiescent state, stirred occasionally by rumors of beautiful new irises being created in France, England, and America. Until last spring, however, circumstances did not permit the writer to become familiar with more than a score of new iris varieties—when all at once the long anticipated became possible and the writer was able to devote a full six weeks to visiting iris shows and the major plantings of Southern, Far Western, and Northern iris growers. To a dyed-in-the-wool gladiolus fancier, it had all the thrill of the discovery of a new world.

What iris varieties have the greatest appeal to a glad fan, is the question I shall try to answer in this summary of a season's impressions. As to the different iris color-classes I think the blues would be the favorites. We have tried so hard to get good blue glads and while we have made more progress than we thought possible ten years ago, we are still so far from the ideal that the fresh, exquisite blues of some of the finer iris are indeed a feast to the glad fancier's eyes. I am told that the popularity of the blues is increasing also among iris fanciers. Certainly it would seem natural with such superb varieties as *Missouri, Sierra Blue,* and *San Diego,* now available. Massed plantings of any of these should be unbelievably beautiful.

Among the light blues none was more appealing than Essig's



*Robert Schreiner*

*Shah Jehan*

*Shining Waters*—paler, slightly bluer than *Sierra Blue,* possessing a clear, fresh color and a delicate silvery sheen. Soft *Summer Cloud,* a light blue bicolor, was another iris exceptionally easy on the eyes. *Paulette,* one of the giants of the iris world (rivalled only by *War Eagle* and *Nene*) had falls three and one-half inches in diameter—nothing strap-shaped about the style of this splendid French origination. *Ballerine* is old, to be sure, but I think still one of the loveliest—and so distinctive with its delightful ruffling and coyly-modest falls.

The deep blues or blue-violets are a profound joy. How well their beauty wears in the memory, like the delights of *Il Penseroso.* Perhaps the favorite was *Mrs. J. L. Gibson,* which might be described for those who may not have seen it as a taller, larger, and better branched *Souvenir de Madame Gaudichau,* but of much superior texture because of its Dominion ancestry. It is truly a magnificent iris, and is destined, I would imagine, for the same preeminent popularity *Gaudichau* enjoyed for so long. . . . Some very odd colors are being produced in the floral world today. I have seen green flowers, gray flowers, bronze flowers, but except for the pansy no flowers that could be called black except by poetic license. One of the finds of the season, therefore, was my discovery at Schreiner's Iris Gardens of a really black iris—a seedling which they have named *Ethiop Queen.* It is not entirely black: I would say that two-thirds of the falls are absolutely coal black, the rest of the falls upon close inspection revealing the faintest suggestion of purple. Standards are deep black-purple. Perhaps black sounds like a dull color for an iris? As a matter of fact *Ethiop Queen* had the richest lustre of any iris I saw this season. It is a large flower of very heavy substance. It should give you a real thrill when stock is ready for dissemination. . . . Another prepossessing deep blue-violet is *Valor.* True there is a whimsical touch of angularity, a little hitching of the shoulders, about this beauty but this does not seriously detract. *Winneshiek* is a fine blue-violet, rich and velvety. It is somewhat similar to *Mrs. J. L. Gibson* but is not as large. Also similar to *Mrs. Gibson* but not as tall was Dr. Kirkland's *Black Beauty*—a very rich flower of perfect form. The bluest iris seen anywhere was *Aline,* an appealing self-color approaching a light azure.

Among the plicatas, *Los Angeles* is easily the queen. There is the hush of majesty about its regally-borne blooms, so perfect in form, so waxy in texture, so impeccably pure in color: votive wands carved from snow with crisp little blue shadows gathered about the haft and a golden light playing about the beard. . . . The Sasses have a plicata called *Maid of Astalot* which is going to be heard from. I know of no iris like it in form; the standards of each flower are cupped to make a perfect dome. The effect of serene poise secured is quite remarkable. In color it resembles *Los Angeles*. . . . Among the pink plicatas I thought *Tarantella* outstanding.

What noble whites have recently been secured in the iris world! An established clump of *Purissima* (where it doesn't winter-kill) is breath-taking in its purity. More golden-lighted, by its orange-yellow beard, is *Easter Morn*—so beautifully named. But it too is tender. However, Northern fanciers can today have hardy whites that rival the tender in beauty and general excellence. *Snowking,* less flaring than either of the above, is superb in every respect. *Crystal Beauty* bespeaks its own crystalline perfection. There is a sculpturesque quality about the form of this flower, seen only in some of the finest iris. And its virginal purity of color is unsurpassed. *Gudrun,* too, is a splendid sort: a giant of heavy texture: snowy but lit up with a golden iridescence.

One of the discoveries of the season with me was *Shah Jehan,* in the white bicolor group—an iris containing seven distinctly different colors, not to mention its rich orange-yellow beard. I was amazed at its beauty. Possessing more of a rainbow effect than any other flower that I have ever seen, its colors were nevertheless blended in perfect harmony. Lavender, wine, purple, copper, chestnut, cream, and fawn—all were there, but I will not attempt a detailed description. You have a real thrill coming if you haven't seen this iris. . . . Another bicolor of excellence is the serenely chaste *At Dawning* with shimmering white standards infused with gold and pink falls lit up with an abundant golden glow about the haft. It is a large flower of excellent form.

Among the blue blends *Serenite* and *Persia* were easily my favorites. A combination of purple and dove gray, *Persia* seems without a fault: it is tall, large, finely formed and beautifully branched. *Serenite* falls short of the ideal in the last named respect, but I nevertheless place it first in this class. Its extraordinarily heavy substance, fine size and form, soft Delft-blue falls margined with fawn gold and silvery blue standards almost overwhelmed with the opulence of the golden infusion make it at once a gorgeously rich and exquisitely delicate flower. You will love *Serenite.*

Most distinctive in color is Dr. Kirkland's *Violet Crown* named after the city of Athens where a violet haze lies like a crown over its hills. It is a very large flower of an unusual deep lavender or light purple shade. *Ozone* is an odd electric lavender shade with a pronounced coppery flush near the haft. *President Pilkington* is a soft blend of lavender and fawn; *Evolution* is similar but richer. A distinct iris personality is *Mary Senni,* a giant lavender-rose bicolor.

With such wonderful pink gladioli now in existence, a glad fan can scarcely avoid a touch of superciliousness at so called ''pink'' iris. Nevertheless I did fall in love with *Noweta* (in the pink blend class, but actually the pinkest iris I have seen). Wavy petals and a soft creamy-pink color make this a lovely harbinger of what Iris hybridizers may yet achieve in this color. Still good is *Midgard,* though *Noweta* takes us a step beyond. . . . Two pink blends of a very different type but both fine are *Rameses* and *Hollywood.*

Most appealing is the light-pink class was *Imperial Blush,* an exquisite shell pink creation—tall and large. Of fine form and habit is the lovely *Pink Opal*—in color a light rose pink. . . . In the medium pinks stalwart *Frieda Mohr* would seem still the leader.

Of the many splendid deep purples, *Directeur Pinelle* struck me as preeminent. Unusually long petals contribute to an imposing dignity in its styling; branching is 100 per cent; size and lustre all that could be desired. A great iris! . . . A truer purple of a rich, deep tone is lustrous, self-colored *Motif.* This is another iris that I feel rates near the top. . . . Wine-red is a very rich color. All through the season I looked for something that would fall into just this shade and did not find it, until toward the end I came upon late-blooming *Red Dominion*—in every way a high-class flower.

Just as gladiolus hybridizers have striven for a blue glad because it is the most difficult of attainment, so Iris hybridizers have striven for a red iris. True, the latest creations in the red class are far from spectrum red; but for all that, many of them are among the most handsome varieties. I can readily understand their popularity with Iris lovers. . . . The reddest iris discovered? *Marco Polo* (Schreiner) with Dr. Ayres' *Cheerio* a close second. Other good ones were *Jerry* and *Ethel Peckham* (a giant but a trifle plain in form). Sass' *Joycette,* large and of wonderfully precise form, is one of the best. But this time I am leaving the most beautiful variety to be mentioned last: in my estimation it was Schreiner's new *Beowulf*—and other fanciers who saw it seemed to agree practically without exception. This iris comes closest of all to being a

*Robert Schreiner*

*Eclador*

true maroon. The heavy, velvety falls are softly margined a rich fawn brown and the standards are of the same color with golden glints. This was one of my ten favorite iris of the season.

Somewhat similar to *Beowulf* but browner (rather than maroon) is *JEB Stuart,* one of the most distinct of recent creations. In the red class, but something of a blend, is *Junaluska,* a very finished iris. A large coppery red of unusually fine color is Sass' new *Spokan.*

One of the few outstanding varieties I was familiar with before I began my trek of last spring was *Deputé Nomblot.* I had seen a single spike when it first bloomed in this country but had not seen it since. I had never ceased to rave about *Deputé Nomblot,* and it was a real thrill to see hundreds of spikes of this giant bronze-purple blooming in lavish, casual perfection! How grateful we should be to M. Cayeux for giving us iris with such broad falls and such superb form!

Of all the color classes I was least thrilled by the yellow-bicolors, but of course we want a few. My choice would be Sass' *King Juba* or *El Tovar* or *Vision* from Cayeux. All are very rich and vigorous growers.

Among the yellow blends *Jean Cayeux* is of course first, though its colored portrait is too flattering as to richness of tone. *Euphony,* though small, I consider very interesting. Here is one Iris with ruffling comparable to that of ruffled glads. Its substance too is unique.

Though I saw many fine new yellows, there were four which outclassed all the others: *Eclador, Lucrezia Bori, California Gold,* and *Happy Days.* All of these are magnificent Iris. In purity of color, I would place them in this order: *Eclador, California Gold, Happy Days, Lucrezia Bori*—(California Gold is the *deepest* yellow). In beauty of form they line up thus: *Eclador, Lucrezia Bori, California Gold, Happy Days.* In size and height: *Lucrezia Bori, Happy Days, Eclador, California Gold.* My personal choice of these four is *Eclador.* The public's will probably be *Happy Days,* with *California Gold* and *Lucrezia Bori* strong runners-up. (I should mention that I did not see *Alice Harding,* another outstanding yellow and one of the very few important iris which I did not encounter in any planting or show visited.)

Years ago in floral work with glads, I discovered that creamy whites and pale yellows surpassed all other colors in the ease with which they could be used in harmonious color-combinations. This same principle makes iris of these creamy tones of exceptional value in the landscape picture. Compared to whites and yellows, creams have, unfortunately, been rather neglected by iris hybridizers. However, some really fine ones are beginning to appear. The two best in my opinion are *Golden Treasure* (Schreiner) and *Sunmist* (Nicholls). The latter, an iris for foreground planting, has heavy, crinkly petals and sparkling, crystalline texture. *Golden Treasure* which grows 42 inches tall, is a large clean cut Iris of rich cream with a strong suggestion of golden light glowing at the center of the flower. It possesses a fine silky sheen.

I have mentioned in this article only the major thrills of the past iris season. There were innumerable lesser thrills, which I should like to recount. It was, I am told, one of the finest blooming seasons in years. The fraternity of iris fanciers were everywhere a delight to meet. The whole experience was like a delightful excursion into a new world, but one which I hope to continue to make my own.

# SOME EXPERIENCES WITH IRIS SPECIES AT LONDON, CANADA

### Alexander M. Ross

■ During the summer of 1928 a clump of *I. pseudacorus* (the English water iris) bloomed profusely in my garden. I was so pleased with its beauty that I decided to try a few other species. The soil here is a coarse loam that packs down hard on a gravel bottom. I prepared a bed by screening out the gravel to a depth of twelve inches. Then mixed one-third old rotted cow manure, one-third peat and one-third soil. That fall I planted *I. cristata* and *I. gracilipes.* In the spring of 1929 while reading through an iris catalogue, I was quite pleased with the description of *I. fulva* and a few other species. I ordered *I. dichotoma,* I. Dorothea K. Williamson, *I. fulva, I. foliosa, I. ochroleuca, I. tectorum.* These species came from The Iris Place at Lexington, Ky. These iris, upon arrival, were completely dried out. I thought they had perished. Much to my surprise several of them quickly recovered, sending up new foliage. The same summer I ordered several species from Mr. and Mrs. P. Murrell of the Orpington, Kent Nurseries in England. The species received were *I. aurea, I. clarkei, I. foetidissima, I. forrestii, I. graminea, I. laevigata* Rose Queen, *I. longipetala* (syn. Missouriensis), *I. lurida* (syn. Redouteana), *I. milesii, I mirza, I. monnieri, I. sintenisii, I. spuria, I. stylosa, I. Tol-long* (*Tolmeiana* × *longipetala*), *I. versicolor, I. versicolor* Kermesina, *I. wilsoni.* The same month I also received from the Indian Spring Farms, Inc., at Baldwinsville, New York, the following species: *I. dichotoma, I. ensata, I. fulvala.* With this lot firmly planted and given such winter protection as deemed necessary I anxiously looked forward to the following April to ascertain the number of my treasures that had survived the winter. I was delighted to find all except two had come through in good condition. *I. clarkei* and *I. milesii* had frozen out and rotted. Several of the species made good growth in their new home, while others did poorly. These were moved to other locations in the garden, given special care as to soil, etc., but they eventually passed out. Others have grown on, sending up an abundance of foliage each year but no bloom. *I. versicolor* bloomed freely and spread so rapidly that it finally landed on the rubbish heap.

The species giving the best results are *I. fulva,* a species that carries a unique color of terra-cotta, brick red. Its beautiful colored blooms delighted all visitors who saw it in bloom. A weekly application of liquid manure with plenty of water is beneficial before blooming. I. Dorothea K. Williamson, an old reliable hybrid of velvety royal purple has done well blooming yearly. In 1932 I crossed I. Dorothea K. Williamson with *I. pseudacorus.* Two seedlings bloomed this summer—one a bronzy red with orange reticulations, the other maroon red. Several other seedlings of this cross are yet to bloom. I also crossed I. Dorothea K. Williamson with *I. fulva* (one of its parent plants). Five seedlings bloomed last summer, color—deep mauve, light pink, bright maroon, light purple and red—a much deeper red than *I. fulva.* Visitors who saw these in bloom were so pleased with them, that I inserted an advertisement in our local newspaper for two days, inviting the members of our Horticultural Society and other flower lovers to come out and view the bloom. The response was indeed very disappointing. With a population of over 60,000 people in this city, less than 20 persons were interested in these beautiful flowers. *I. foetidissima,* with its evergreen foliage, makes fair growth each season but no bloom. The odor emitted by this species flavors too much of sewer gas to make its presence worthwhile. It will be moved out next spring.

*I. spuria,* a tall dark blue species, blooms freely. *I. graminea,* a pretty dwarf growing species—12 inches in June, with sweetly scented reddish-violet flowers, is a robust grower, greatly admired. I have yet been unable to germinate the seed from this one. *I. laevigata,* Rose Queen, a pretty species with soft rose flowers and 2-foot, broad grass like foliage, is very pleasing. *I. tectorum,* a beautiful species native of China, known as the roof iris, has short, broad foliage, with loose sprays of flat rich light blue flowers. This is sold as a tender species. It thrives in a bed of sand enriched with old manure, close to the foundation of my dwelling on the south side. I cover it each winter with about six inches of excelsior (wood packing). It came through the winter of 1933-34 unharmed. The mercury dropped below zero for 21 out of 28 days in February. The lowest point reached was 26 degrees below zero. That winter proved the test for iris of all kinds. Apple trees by the hundred were killed. The city was almost devoid of roses. Only a few climbers of the hardier varieties that had been given good protection survived. My clumps of Purissiama, Persia, San Francisco and

Souv. de Loetitia Michaud came through the zero weather uninjured and bloomed to perfection. *I. foliosa,* with its peculiar zigzagging method of growing has established itself and blooms freely. *I. dichotoma,* the vesper iris, is an elegant species producing on its branching stems in August and September more flowers than any other iris. It does well in most any kind of soil, not too moist. It blooms the second year from seed. I still have one of the original roots purchased about five years ago. The many seedlings I have bloomed of this species, came true to the parent plant, showing no variation whatever in form or color. *I. lurida* (syn. Redouteana) is an easily grown species with flowers of unusual coloring, standards brownish purple, falls reddish maroon, with prominent orange beard. It is early flowering and sometimes flowers a second time in the autumn in England. It has failed to bloom in autumn in my garden. Seedpods form freely on this iris but only air and abortive seeds fill them. The rhizomes are small but of the same nature as the larger German iris, growing well on top of the soil. It grows well in most any soil and does not object to lime. *I. cristata,* with its lovely little turquois blue flowers has proven a valuable addition. No rockery is complete without this little beauty. Although I have experienced considerable success with some species, I must say that I have been unable to provide the proper space and soil for many of them, owing to my limited area in a small city garden. Had it not been for my kind friend and neighbor, Mr. Samuel Hamilton, who is an enthusiastic iris grower and flower lover, I should have been compelled to cease operations long ago, because of the lack of planting room. However, he kindly provided space for several of the species. Last fall he placed half his rear garden lot at my disposal to carry on my activities. With the assistance of my good neighbor I may yet succeed in producing something really worthwhile. My advice to others who would try the species is to procure seed of the species desired, and raise your own plants. These will prove more satisfactory than roots purchased abroad.

All too frequently the change in soil and climatic conditions are so adverse that the roots perish. Some seed of *Iris arenaria* planted last spring are making wonderful growth and in a few years I expect to have this little sand loving iris from Hungary with its pleasing yellow flowers in bloom in my garden.

# CONCERNING OLDER IRIS VARIETIES

## By John C. Wister

■ Some of the early Bulletins of the Society contained carefully standardized descriptions of the important varieties then in commerce, but in recent years comment on varieties in the Bulletins has nearly always concerned itself with novelties. This has been so evident that a good many people have complained that varieties are mentioned only when they are new and expensive and unobtainable, and when these same varieties are cheaper in price and have proved their worth, no one mentions them so that recent members or those with rather meager pocketbooks (which seems to include everyone nowadays), do not find much mention of the good older things which probably they should be growing.

With this thought in mind it has given me a good deal of interest and amusement to go through my own collection of some 200 varieties and to classify them by period of introduction. My garden beds are all arranged and classified by color and therefore it was quite easy to make out a chart classifying the following periods: Before 1900, from 1900 to 1909, 1910 to 1919, 1920 to 1924, 1925 to 1929, 1930 to 1932, and finally from 1933 to 1934.

I have been quite aware how much the older varieties have been dropping out, but I was really amazed to see how few I had left when I got through with this tabulation. For of all varieties of the last century there are represented in my collection only the two Mrs. Darwins, and I keep them mostly out of sentiment, Princess Beatrice, Queen of May, Flavescens and Aurea. Most of my Iris friends would scorn to keep any of these except Princess Beatrice, but the period from 1900 to 1909 also has but very few important varieties left. There are Juniata, Mt. Penn, Parc de Neuilly in the blue and purple, Nuee d'Orage and Quaker Lady in the blends, Gajus, Iris King and Loreley in the bicolors. What a mere handful of the hundreds of varieties that were in existence at the time I began to grow irises.

The 1910 and 1919 period brings us some important additions. Varieties that seemed essential to us then and which have won such an important place in gardens that it is going to take some time to displace them, but there are comparatively few considering the great burst of iris enthusiasm in those ten years and the great number of irises introduced. In the whites I have La Neige, White Knight, White Queen, Pocahontas and Rhein Nixe.

The modern iris fan (or fanatic if fan is the abbreviation of that word) will turn up his nose at all of these, but I find them useful in the garden picture, good strong, sturdy growers of varying heights, and I am in no hurry to part with them.

In the blues and purples there are B. Y. Morrison, Crusader, Corrida, Lord of June, Mandalay, Queen Caterina and Souv. de Mme. Gaudichau, and Tom Tit. Perhaps there is good reason to discard some of these yet each one has an important place to me in spite of the many new varieties that have come in since.

In pink there is but one representatives and that is Dream.

In blends there are Alcazar, Cardinal, Col. Candelot, Cretonne and Opera, and in the yellows, of course, Shekinah.

The varieties that I have mentioned are all that is left of the period before the war, and the early period of the introductions of Farr, Williamson and Miss Sturtevant in this country, of Foster, Perry, Dykes, Bliss and Hort in England, and of Denis, Cayeux, Millet and Vilmorin in France, and Goos & Koenemann in Germany. What a handful this is! I had in my garden before the war at least 600 varieties, all of which are gone and I hope forgotten. In the early days of the Society we assembled at Bronx Park over 500 more old varieties which are of no importance except as a reminder of early beginnings and of the progress that has been made since.

It seems to me that if we admit that the ordinary gardener of today has not the pocket-book nor the opportunity for study to choose from the 200 or 300 new varieties introduced yearly, and that if we classify as expensive novelties beyond the ordinary pocket-book, that the period since the war falls quite naturally into three sections. The 1920 to 1924 period has of course the longest time to shake down and to eliminate the unimportant. A surprising number of our best varieties come in this period, but not as many as in the 1925 to 1929 period. A glance at the chart will show how much greater this second period is but I should just like to call attention to some of the important varieties.

In the 1920 to 1924 period we were given Athene, True Charm, True Delight and Mildred Presby. Surely there is nothing here for even the modern expert to criticise.

In the blues Horizon and Souv. de Loetitita Michaud, and in the purples Louis Bel, Seminole and Prospero. Three of our most important pinks come in this period: Dr. Mayo, Rheingauperle and Susan Bliss. Of the blends we have Ambassadeur, Bruno and Steepway, and in yellows Aliquippa, Chalice and Gold Imperial.

Every good collection nowadays should have many irises from the period 1925 to 1929. These have been the ones that have been so ecstatically described in the BULLETIN in the past when they were new and expensive. Now they are all cheap and can be had by any one. The list is long but typical varieties are Shasta, Los Angeles, Mary Barnett, Sensation, Katherine McFarland, Frieda Mohr, Serenado, Baldwin, Morning Glory, Deputé Nomblot, Vert Gallant, Dauntless, Grace Sturtevant, Dolly Madison, Rameses, Zaharoon, Helios, Coronation, Pluie d'Or and W. R. Dykes. All of these from the boom years before 1929.

All the world has suffered a depression except the iris world for new varieties have continued to come out very fast. I have indicated but a few of them on my chart. They seem to be among the most important and among the most likely to survive, but here there will be much difference of opinion among our experts, for they are still so new that they have not been widely enough tested. I will leave their discussion, therefore, to others and end these notes with a plea to our members not to forget to include some of the older types in their gardens, for they assuredly deserve a place.

# LIST OF IRIS GROUPED CHRONOLOGICALLY AND BY COLOR

| *Before 1900* | *1900-1909* | *1910-1919* | *Color* | *1920-1924* | *1925-1929* | *1930-1932* |
|---|---|---|---|---|---|---|
| Mrs. G. Darwin<br>Mrs. H. Darwin | | La Neige<br>White Knight<br>White Queen | *White* | Gaviota<br>Micheline Charraire<br>Moonlight | Alabaster<br>Chartier<br>Shasta<br>Snow White<br>Zada | Venus de Milo<br>Wambliska<br>Easter Morn |
| | | Pocahontas | *Plicata* | Athene<br>True Charm<br>True Delight | Ensorceleur<br>Los Angeles<br>San Francisco | Theodolinda |
| | | Rhein Nixe | *Amoena* | Mildred Presby<br>Vingolf | Folkwang<br>Rheintochter<br>Dorothy Dietz | |
| Princess Beatrice | Juniata | B. Y. Morrison<br>Crusader | *Blue and Blue* | Duke of York<br>Lady Chas. Allom | El Capitaine<br>Floridor | |
| | | Corrida<br>Lord of June<br>Mandalay<br>Queen Caterina<br>Sv. Gaudichau | *Purple* | Horizon<br>Odaroloc<br>Sv. Loetitia Michaud<br>Western Dream<br>Louis Bel | Mary Barnett<br>Pacific<br>Sensation<br>Blue Velvet<br>Katherine McFarland | Sierra Blue<br>Black Wings<br>Meldoric<br>Royal Beauty |
| Queen of May | | Dream | *Pink* | Dr. Mayo<br>Rheingauperle<br>Susan Bliss | Ambrosia<br>De Bussey<br>Distinction<br>Serenade | Pink Satin |

| *Before 1900* | *1900-1909* | *1910-1919* | *Color* | *1920-1924* | *1925-1929* | *1930-1932* |
|---|---|---|---|---|---|---|
| | Mt. Pern | Tom Tit | *Red and Blue* | Seminole | Frieda Mohr | |
| | Parc de Neuilly | | *Purple* | Prospero | Fascination | |
| | | | | | Thais | |
| | | | | | Baldwin | M. A. Porter |
| | | | | | Buto | Violet Crown |
| | | | | | George Tribolet | |
| | | Cretonne | *Red and Red* | | Cinnebar | |
| | | Opera | *Blends* | | Mt. Royal | |
| | | | | | Nene | |
| | | | | | Morning Glory | |
| | | | | | Senlac | |
| | | | | | Labor | |
| | | | | | Deputie Nomblot | |
| | | | | | Allies | |
| | | | | | Numa Rumestan | |
| | | | | | Hernani | |
| | | | | | Vert Gallant | |
| | | | | | Dauntless | Ethel Peckham |
| | | | | | Gobelin Red | Joycette |
| | | Col. Candelot | | | Indian Chief | |
| | | Cardinal | | | Mary Elizabeth | |
| | | Alcazar | | Ambassadeur | Don Juan | |
| | | | | Bruno | Grace Sturtevant | |
| | Nuee d'Orage | | *Lighter* | Mary Gibson | Anne Marie Cayeux | Hypnos |
| | Quaker Lady | | *Blends* | Nimbus | Churchmouse | Mary Geddes |
| | | | | Steepway | Dolly Madison | Pres. Pilkington |
| | | | | | Evolution | Jean Cayeux |

| *Before 1900* | *1900-1909* | *1910-1919* | *Color* | *1920-1924* | *1925-1929* | *1930-1932* |
|---|---|---|---|---|---|---|
|  |  |  | *Lighter Blends* |  | King Midas<br>King Tut<br>Persia<br>Avatar<br>Frivolite<br>Jane Williamson<br>Marquisette<br>Midgard<br>Rameses<br>Zaharoon<br>Nepenthe<br>Allure<br>Daydream<br>Elsinore<br>Euphony<br>Fra Angelico<br>Henri Riviere<br>Nicholas Poussin<br>Ophelia<br>Yves Lassailly<br>Anosia | Opaline<br>K. V. Ayres<br>Clara Noyes<br>Quevera<br>Marquita |
| Flavescens<br>Aurea |  | Shekinah<br>Sherwin-Wright | *Yellow* | Aliquippa<br>Chalice<br>Gold Imperial<br>Yellow Moon | Helios<br>Boneta<br>Britoness<br>Coronation<br>Goldstream<br>Pluie d'Or<br>Primrose<br>W. R. Dykes<br>Greuze | Altai Californica<br>Chromylla<br>Desert Gold<br>California Gold<br>Eclador<br>Phebus |
|  | Gajus<br>Iris King<br>Loreley |  | *Yellow bicolor* | Flammenschwert<br>Rialgar | Gay Hussar<br>Lodestar | Beau Sabreur<br>El Tovar |

# VIABILITY OF POLLEN

## Dr. Ford B. Rogers

■ Three years ago (1932) in corresponding with a prominent iris raiser I suggested that practicability of obtaining pollen from some distant point and having it sent by mail to be used on blooming flowers in own garden. I was told that pollen deteriorates rapidly; that the moisture swells the grains and they burst; that they would mold; and would spoil on account of the heat. I was perfectly satisfied from this information that it would be time wasted to try using pollen sent to me; until I read in A.I.S. Bulletin No 52—July, 1934—the following sentences from two different articles.

On page 6—Prof. Edward O. Essig says, ''Pollen has been kept in open pill boxes for over a month without apparent deterioration, but the exact duration of viability will probably have to be ascertained for each type of variety.''

On page 48—I found from Mr. C. G. White, ''In our dry air pollen spoils quickly but removed from the anthers and capsuled it is good for a month or six weeks, an important consideration. Lady Collet taught me that trick.''

After reading this I decided to do a little experimenting, and with the kind assistance and generosity of Mr. J. Marion Shull of Chevy Chase, Md., Henry Lee Grant of Louisville Ky., and Mr. W. S. Snyder of Sioux City, Iowa, I received pollen from many fine varieties which was used on my flowers in Fairmont, W. Va. I used two-drachm glass vials, placing in the bottom of each a piece of calcium chloride about the size of a lima bean, then a small piece of absorbent cotton, then the cork. A blank label was pasted on vial large enough for name and any remarks. These were placed in card board boxes (to prevent breaking), and sent to the above named gentlemen, who placed anthers in the bottle above the cotton and sent to me by ordinary mail. When not being used in the garden the vials were kept in the Electrolux at a temperature of about 40 degrees. From one source the pollen arrived May 10, 1935, was used on some intermediates but most of it was kept from one to three weeks to be used on the T.B. From the other two the pollen arrived June 5th and 10th, entirely too late except for my very latest iris.

I received pollen from the following varieties: Clara Noyes, Pink Opal, Indian Chief, Shasta, San Francisco, Dauntless, Selene, Alice

Harding, Aubade, Fascination, Dune Sprite, Katherine V. Ayers, Pres. Pilkerton, etc.

I pollinized 113 flowers, with 72 failures and 41 pods with seeds. About one success to three failures.

This I consider a very high percentage of takes especially when you consider 23 of these were on intermediates (12 pods were produced on intermediates). I gathered 41 seed pods containing from 1 to 69 seeds, a total of 550 seeds or an average of 13 seeds to each pod.

Wambliska × Selene produced the pod that contained 69 seeds.

Dune Sprite used on 15 flowers did not produce a single pod.

San Francisco used on 16 flowers did not produce a single pod. Can someone tell us if the pollen from these is usually sterile?

Dauntless gave 5 pods with 7 failures.

Selene gave 14 pods with 7 failures.

Alice Harding gave 7 pods with 3 failures.

Aubade gave 3 pods with 11 failures.

If we eliminate the 15 failures from Dune Sprite and the 16 from San Francisco the results would be 41 pods to 41 failures which is remarkable. As most of the varieties were recent plantings probably the sterility was not known by the senders.

The distances that the pollen was sent by ordinary mail was from 200 to 1,000 miles.

I consider these results very successful and worthy of further trial. Probably other methods will prove more successful. It would be interesting to have information on the pollen of known potency from many varieties. We will probably find pollen that will keep under adverse conditions and others that will deteriorate rapidly, and all gradations between these extremes. We should be reasonably sure that the seed parents are potent and capable of producing pods.

What of it if pollen can be sent a long distance and retain its potency? The great benefit to hybridizers is easily seen. Advantage can be taken of the different blooming time between northern and southern gardens. Pollen from T.B. iris can be sent north to be used on dwarfs and intermediates, and pollen of dwarfs from the north sent south to be used on their T.B. iris. In ones own garden pollen from dwarfs and early bloomers can be kept to be used on later blooming varieties. Or one can send pollen from a favorite of special parentage to a fellow hybridizer and thus save from two to three years waiting for a rhizome of this variety to produce a bloom stalk (pollen).

# KOTAKA-YEN, HORIKIRI, JAPAN, PRESERVED AS A FAMOUS SCENE

### George M. Reed

■ In 1919 the Japanese Government passed a law for the preservation of Historic Relics, Famous Scenes, and Natural Monuments. The rapid expansion of industry in modern times has led to the destruction of many historic places, the marring of beautiful scenery and geological formations, and the extermination of rare plants, animals, and their habitats. The carrying out of the provisions of the law is under the supervision of the Department of Home Affairs.

A large number of botanical objects have been taken over for preservation. These include several famous shrine groves, typical primeval forests, the habitats of rare plants, rare trees of unusual size, as specimens of cryptomeria, mountain cherries, and gingko. The boundaries of distribution of some remarkable plants are also included, for example, the northern limit of *Cycas revoluta,* the southern limits of *Rosa rugosa* and *Iris Rossii.*

The Hana-shōbu Garden at Kotaka-yen is one of the most recent places to be preserved as a Famous Scene under the provisions of the law. This action was taken in February, 1933, and the preservation of the garden is due partly because it comes under the head of Famous Scenes which deal with noted parks and gardens, and also under another heading of Famous Places for flowers, trees, birds, animals, etc.

Dr. Manabu Miyoshi has written an account of this garden entitled Famous Scene: The Hana-shōbu of the Kotaka-yen, Horikiri, which is published in Volume 12 of the "Reports on investigations of the historical relics, famous scenes and natural monuments of the Prefecture of Tokyo," which appeared in March, 1935.

Although the opening date of Kotaka-yen is uncertain, it became well known in the Tempo Period (1830-1844). It is recorded that the early varieties cultivated there were derived from the garden of the contemporary Hana-shōbu lover, Sakingo Matsudaira, who lived from 1774 to 1857. Many of his varieties are still listed as growing there. The total area taken under the care of the Government is approximately 5 acres. A good deal of this area consists of the ground around the dwelling or given over to the cultivation of rice and vegetables. The area devoted to the iris is about 1 1/3 acres. This area is level and divided into beds which, during the growing season, are flooded with water. The boundaries of the beds are raised paths which enable the visitors to view the iris. There is an artificial hill on the grounds with an observation pavilion from which one may glance over the entire garden below him and look across the fields beyond. Several fine pine trees are growing in the garden.

Dr. Miyoshi's publication includes five chapters.

Chapter 1: Hana-shōbu and related species. A very brief mention of the common species of iris in Japan.

Chapter 2: The diversified nature of wild Hana-shōbu. A brief account of some of the color variations in the wild plants, as found in different parts of Japan.

Chapter 3: The origin of Hana-shōbu cultivation by Sakingo Matsudaira. A full account of what is known regarding the early history of the development of Hana-shōbu is given.

Chapter 4: The history of Kotaka-yen, Horikiri. The account of the early history of this garden is quite complete.

Chapter 5: Improved Hana-shōbu varieties of the Kotaka-yen. A brief description of 100 varieties.

Most of the information in the first four chapters is given in Dr. Miyoshi's Explanatory Text which accompanied his Illustrated Album of Hana-shōbu published in 1920. A translation of this work appeared in the American Iris Society BULLETIN for July, 1932. Some additional facts with reference to the life of Sakingo Matsudaira and also of the history of Kotaka-yen are brought out.

Of the 100 varieties described in Chapter 5, 85 were recorded in the work just referred to. In the present publication 15 additional varieties are listed, omitting the corresponding number of those described in the earlier work. According to Dr. Miyoshi, in 1905 there were about 250 varieties of Hana-shōbu growing at Kotaka-yen. At the present time, however, the number is very much less.

Dr. Miyoshi's booklet includes a map of Kotaka-yen and 15 plates. The map indicates the boundaries of the garden, the location of the iris beds, the position of the buildings, tea pavilions, trees, rice paddies, etc.

Plate 1 shows the location of Kotaka-yen in Yedo, modern Tokyo, about 1850 and also the location of the residence of Sakingo Matsudaira. Plates 2, 3, and 4 are photographes of the iris growing in Kotaka-yen. Plate 5 is a reproduction of a famous painting of

Kotaka-yen by Hiroshige. Plate 6 shows the caligraphy of the Daimio of Owari, who visited the garden in its early days; a sketch of the Hana-shōbu of Kotaka-yen is also given. Plate 7 is a photograph of the gravestone of Sakingo Matsudaira, who is buried at the Higashi Kaijenenji Temple at Shinagawa.

Plate 8 gives good colored figures of three types of wild Hana-shōbu, showing the color variation of the flowers. Plates 9 to 15 illustrate in color 22 garden varieties, a few being natural size while the others are reduced. Most of them are quite accurate color reproductions of the varieties named.

If left to the natural course of events, Kotaka-yen would doubtless disappear on account of industrial developments. The action of the Japanese Government, however, is intended to preserve such famous places, and years hence visitors may go to Horikiri and see the Hana-shōbu garden of Kotaka-yen in much the same condition as it was nearly 100 years ago.

*Brooklyn Botanic Garden, Brooklyn, N. Y.*

# IRISES—NORTH AND SOUTH

### R. S. STURTEVANT

■ The depression took me traveling these last few years and though the traveling has rarely been when irises were in bloom I have both seen and talked irises en route so that I am coming to a slow appreciation of their place in the garden scheme of things. That they have a place, our bearded irises, from north Florida to Quebec is evident but the ways they are used reflect local conditions of climate or living.

Their vigor and endurance has given them as wide a range of distribution as probably any cultivated perennial despite the fact that we have no records of self-sown colonies in America. Their relatively large, showy blooms have brought popularity and the way their rhizomes maintain life under adverse conditions brought them into many a pioneer garden. To be sure they have not made themselves as thoroughly at home as the Tawny Day Lily (*Hemerocallis fulva*) in unrestricted competition with native flora but they are to be found very frequently in yards otherwise almost devoid of shrubs or perennials.

''Common Blue'' (probably the true *I. germanica*) is the most widespread variety north and south, the pearl Florentina a frequent companion but apparently giving away to *I.albicans* in the extreme South where it is reported as having been brought in with the Spanish missions. There is many a new iris enthusiast who completely overlooks their beauty massed with daffodils or tulips. At Charleston, S. C., one may see them edging a lawn starred with the gay white Triteleia ( most pleasant variant from our northern Star of Bethlehem (*Ornithogalum umbellatam*)) and backed up with flaming azaleas while inland, in the southern pines, they may edge a path or hedge a yard of white sand where the only other color is given by yellow daffodils or the intense violet of a sand verbena. They are among the few perennials eligible for a historically Colonial garden.

And from perhaps fifty to one hundred miles inland from the Gulf north to almost the Ohio and the Potomac at least some varieties of irises so thrive as to claim use in quantity rather than as garden flowers. Through the country they have not as yet been used to prevent erosion on the almost vertical banks of red clay (though they might be considered for election to such office) but as soon as we approach the more pretentiously grades streets of a town we find irises. There may be round beds of them spaced between mimosas (I was amazed to find one of those in bloom at the Arnold Arboretum last year) crape myrtles, or flowering dogwoods. The narrow strip between the curb and the paved side-walk may be solid irises, perhaps broken at the corners with clumps of yucca or plants of Pfitzer's juniper. In fact beds of iris may greet you miles before you reach the first buildings of the town. Whether they present a crazy quilt or a ribbon of color I do not know but there is a vast district where iris foliage, even at its worst, is no worse than untended grass. It is a district where rye grass gives way to Bermuda and green all year turf requires almost the care of a garden.

As we go northward with less summer drought and increased grass or weed competition, such a use of irises requires more frequent cultivation and, hence, is less common. They cease to be used on banks, as ground covers under shrubs, or to mark long drives but become occupants of garden beds. And now, too, one is more apt to find the pale yellow of Flavescens or the cherry red and yellow of Honorabilis or, only possibly, the lavender of a pallida, often the pinched falls of Speciosa or the delightfully fragrant Odoratissima. The frilled blue and white of Mme. Chereau is not uncommon; nor the smudgy blends of some unidentified ''squalens'' a name that the A.I.S. has almost frowned out of existence. From report many of our current varieties, each in its own proved range of territory, will join these oldsters in the course of time. But such is slow distribution because these irises are, apparently, almost wholly dependent on man for transportation if not for cultivation. It is, however, rather intriguing to consider that some of our moderns may be much more productive of seed than the old varieties mentioned and may eventually give birth to colonies under natural conditions.

One must travel in the flowering season to know just which species or varieties may grow where or over how wide a range and that I have done only in New England and in one trip west to Freeport and then irises were less evident than in winter on earliest spring in the South and none too many varieties were apparent until one was ushered into a real garden.

From such casual journeyings it is clear that, anywhere, a few people like to raise irises from seed or keep up with the Jones in collecting, that even fewer might be numbered among the intelligentsia and affect a love of wild irises but that hundreds consider the iris as an old favorite familiar to them in childhood and hundreds more take it as a matter of course that there must be irises in every spring garden.

## SPECIES NOTES

### *Iris pseudacorus*

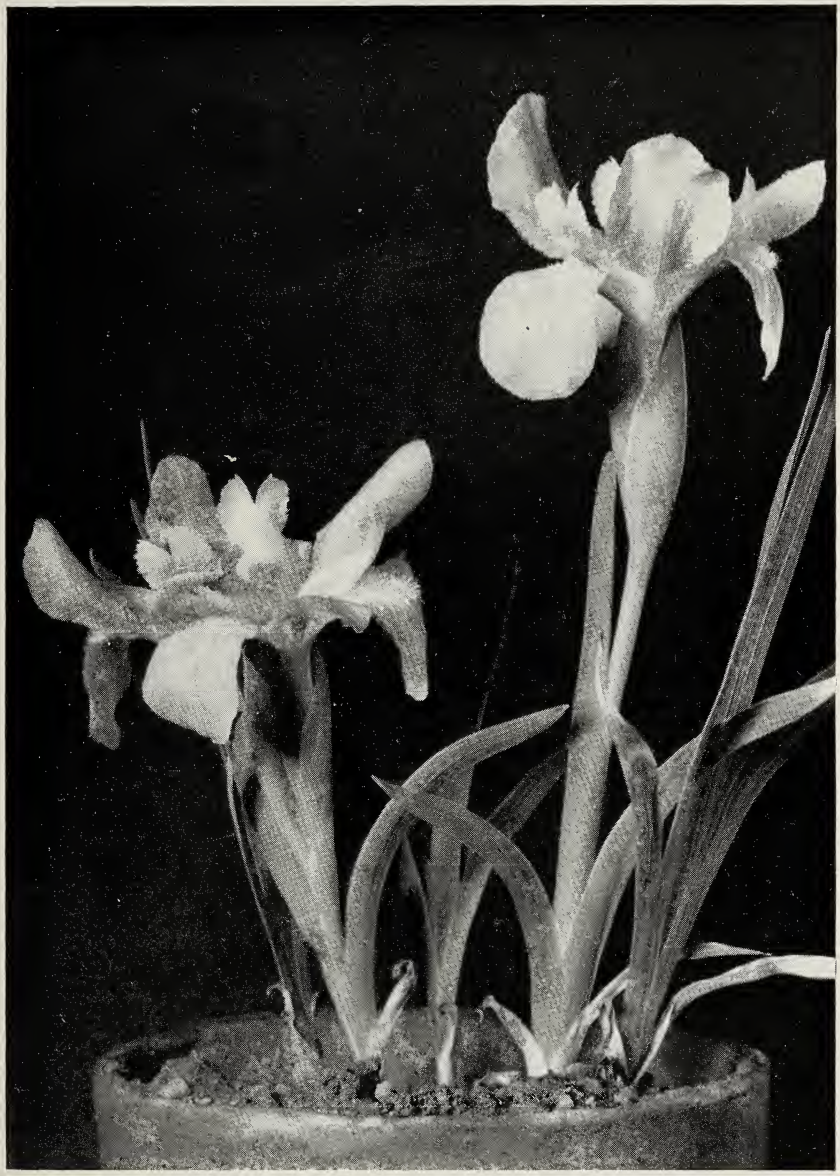
*Iris pseudacorus,* the European Yellow Flag has proved itself at home in many a stream or pond. Probably its first use in quantity was in Central Park the first of the big "landscape parks" planned to bring country vistas into the city. As other cities followed this example this iris was used far more freely than any of the native beardless species and there are very few of the older parks where it has not self-sown along the edges of water. Curiously enough the other European species, *I. foetidissima* with its scarlet seeded pods is rarely seen even in a collector's garden. It would seem that seeds of our native species were both water and bird borne freely but I know of no record of adventitious colonies of the Yellow Flag.

R. S. S.

### *Regelio-Cyclus Hybrid* (*Urmiensis x arenaria*)

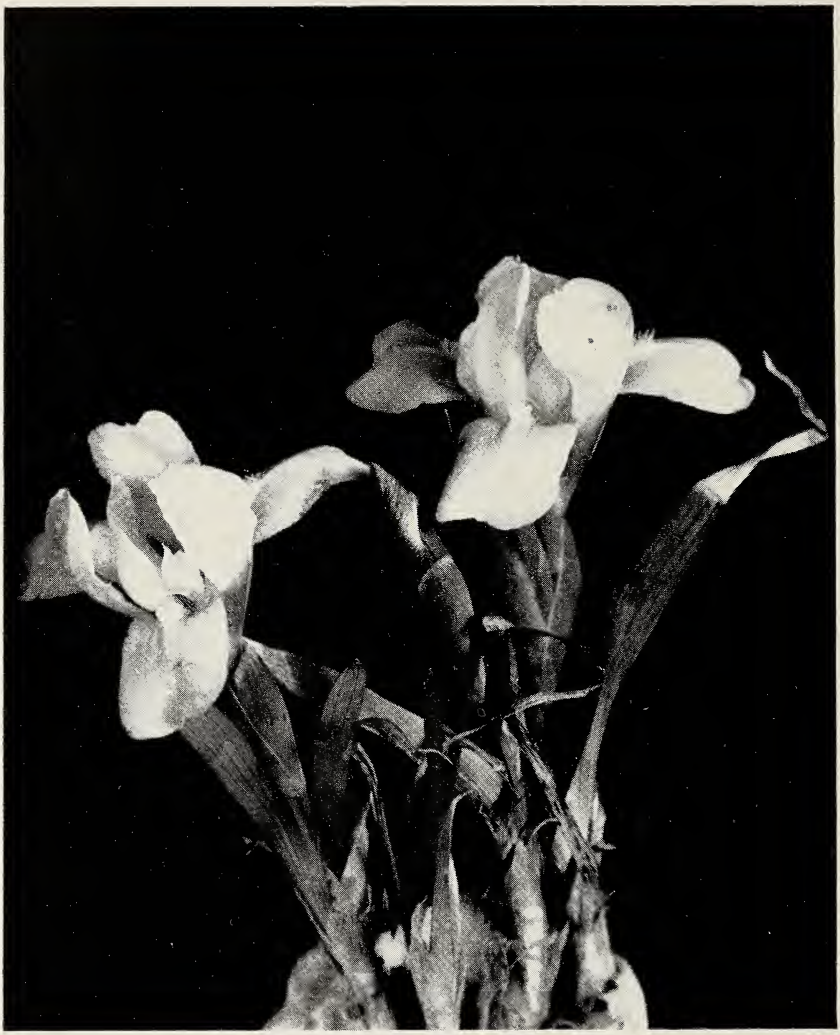
After I had obtained *iris arenaria,* several years ago, I became interested in its particular relationship to other iris. Judging from the rhizome and manner of growth (stoloniferous), it occurred to me that perhaps in reality this was a member of the Regelia group. *Iris arenaria's* growth habits and the manner in which the seed pods *dehisce* are similar to the Regelio mannerisms. *Arenaria* is native to Hungary. Check plants which I obtained from the University garden at Budapest compare with the form I used in my cross.

With the idea that *arenaria* was perhaps a Regelia I applied the pollen of it on Oncocyclus iris *urmiensis.* This Oncocyclus iris, native near lake Urumia in Persia, has proven very hardy here in Minnesota growing well and blooming for over five years. I have seedlings of this species growing without any special culture. *Barnumae* is a near relative of *urmiensis,* being wine colored in place of yellow.



L. A. Guernsey

*Iris urmiensis x arenaria*
(Natural size)



*L. A. Guernsey*

*Iris arenaria*
(Natural size)

The hybrid resulting from the cross of *arenaria* and *urmiensis*, is a small regelio-cyclus, warm yellow in coloring. It is clearly a hybrid inheriting from *arenaria* the vanilla scent and the intermediate flower form from both *urmiensis* and *arenaria* combining the roundness of the Oncocyclus with the small bloom of the Regelia. The fact that it combines various qualities of both the Regelia and the Oncocyclus, I believe, proves it to be a regeliocyclus hybrid. This hybrid has a stouter rhizome than *arenaria* being more like its parent, *urmiensis,* but its growth is distinctly stoloniferous in character. It has proven to need only the simplest of cultural requirements, thriving under the same treatment accorded the ordinary garden iris. It is interesting to note that out of this cross I have had but two seeds sprout. The second seed sprouted this spring after being in the ground for five years. With favorable weather this spring I hope to be able to self the hybrid.

Mr. C. G. White, of California, has a seedling of *Urmiensis* which was crossed by bearded variety Bonita, another yellow. Surprisingly this flower gave unique blue flowers, clearly a pogocyclus hybrid. Mons. Marc Simonet in his work on iris chromosomes, published in Comptes Rendes (Paris), has since brought out some very interesting facts about *Iris arenaria.*

ROBERT SCHREINER.

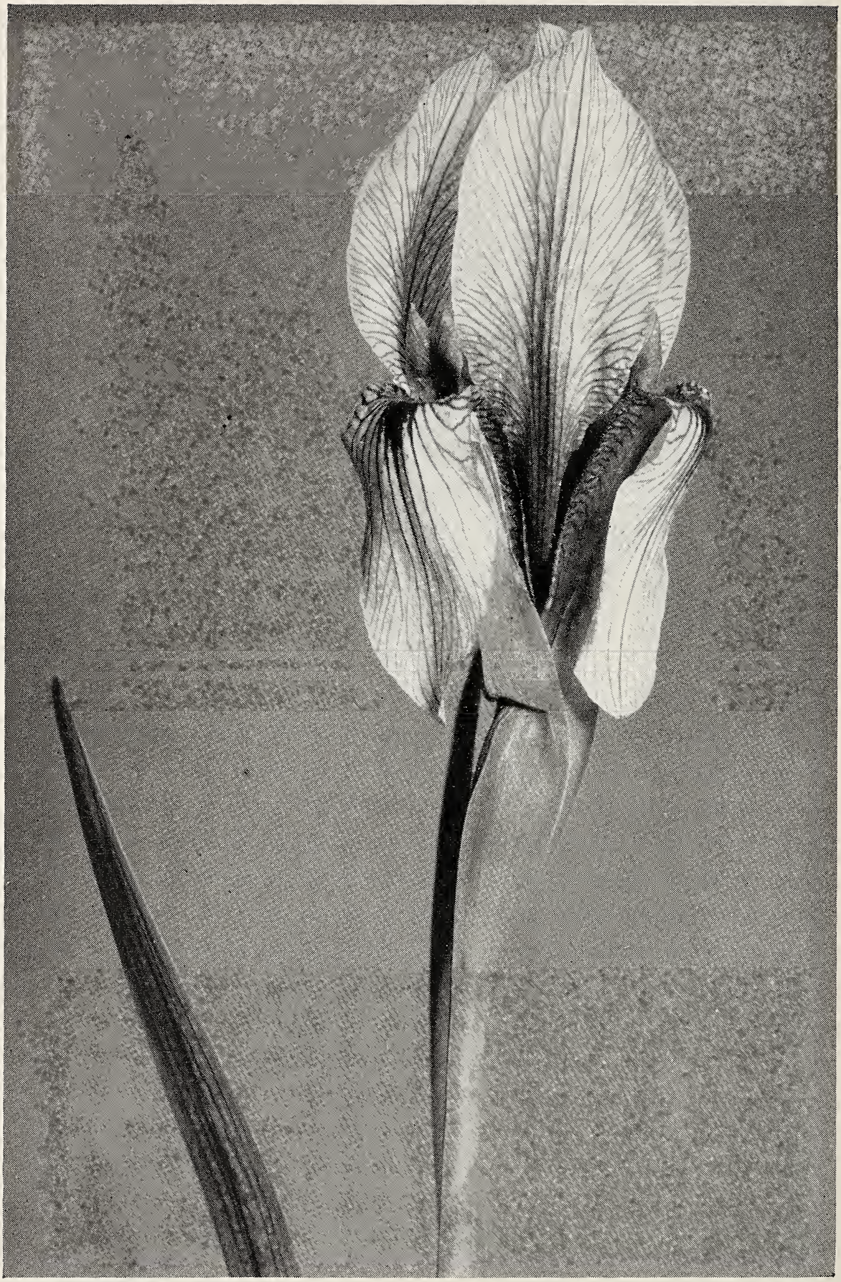
## *Iris korolkowi*

When one first sees the roots of *Iris korolkowi* the thought arises, how shall I ever plant this. There is a strong central rhizome with an obvious top and many elbow-like branches that leave the parent rhizome at most awkward angles, each topped with a thickened beginning of a new rhizome. By much twisting and turning, the octopus-like roots can be gotten down with each growing tip in approximately the upright position.

In due season the vigorous shoots push up, and from them, flower stalks. There are two flowers to each head, following one another like those of any other iris.

The most striking thing in this species is the shape and carriage of the flowers which show clearly in the picture. Next most conspicuous is the marked pattern of venation.

In the type the ground color is not a pure white and yet it is almost impossible to say what the other color might be. One is tempted to record a warm brown. The veins themselves are a warm reddish brown that darkens toward the base of the segments in a color that is repeated in the style branches.



L. A. Guernsey

*Iris korolkowi*
(Natural size)

*Iris korolkowi atropurpurea* (See page 48)

This apparently is a selection from the variable species that differs chiefly in the color of the venation. Here, it is a deep dull purple. The segments also are a little wider and do not lie in such definite up and down directions so that the flower does not have quite the rushing arrowhead look of the type.

*Iris arenaria* (See page 44)

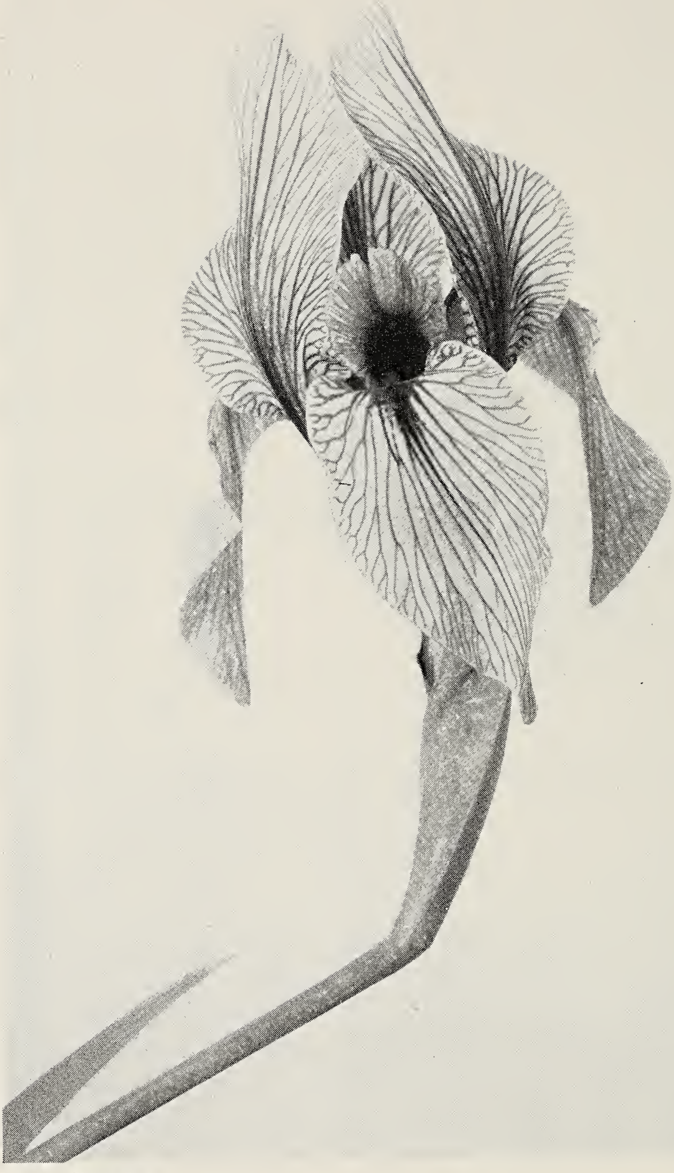
For no reason that seems adequate this species that does so well in many gardens, has never seemed inclined to settle down here. The best luck came with plants that were almost perched upon the edge of a clay bank into which sand had been dug. Here, they lead a long but not particularly floriferous or prolific existence. Another clump planted in a peat sand mixture increased and bloomed well until crowded in upon by other inhabitants. The last lot which were purchased, really to pose for the accompanying picture, are in a sand clay mixture and look extremely well with seed pods setting that in time will pose for their portraits.

As nearly everyone knows, the flowers are fleeting—opening their brilliant yellow in the morning and gone by mid-afternoon so that workaday people see them only before breakfast and on Sundays.

Having failed in all previous attempts at garden portraiture, this season, the plant was dug and carried to the camera, as its dormant stoloniferous root system had been carried before. Later when seeds and seedpods are recorded it will be time to let whatever may happen to the colony.

*Iris korolkowi concolor* (See page 50)

Another color selection is offered under this name which is not nearly as striking as the forms that show the venation that characterizes the type or that has been transmitted to innumerable Regelio-cyclus hybrids. The plant as it has flowered here can be dismissed almost as a deep blue violet self that shows only on



L. A. Guernsey

*Iris korolkowi atropurpurea*
(Natural size)

close inspection a slightly deeper venation and that is not accented by lighter or contrasting colors, either on haft or beard.

*Iris hyacinthiana* (See page 51)

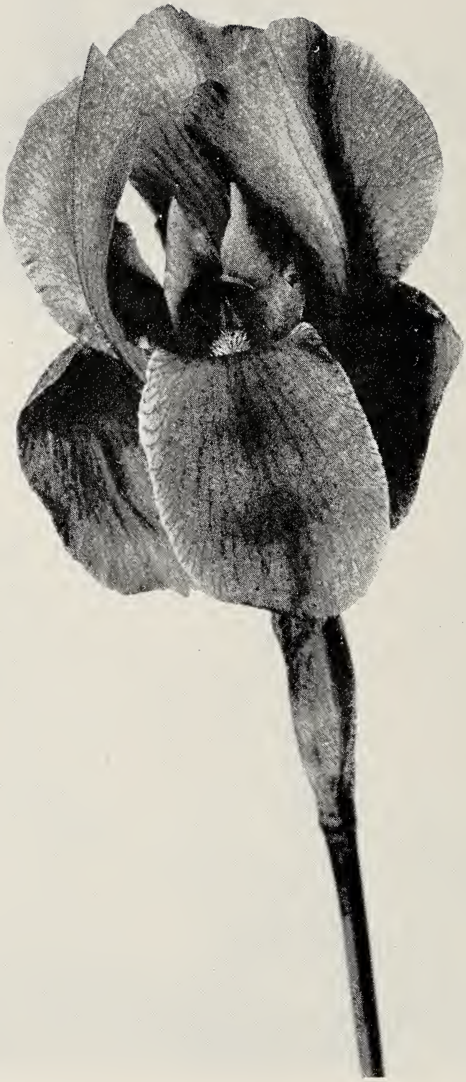
As purchased under this name one feels that this is no more than a slight variant of what used to be known as *Iris ensata,* a plant that Dr. Reed points out elsewhere in this issue must now be called *I. biglumis.* On its arrival it behaved as our old friend the fodder iris usually behaves—namely, sulked more or less for a year and then took up normal living and sent up through its stiff leaves slender, two-flowered heads of scented flowers with deep lilac standards and falls, each marked by a white blotch that makes them appear white. Members are particularly asked for comment on this plant.

*Iris Lorteti* (See frontispiece)

Just as there are places in the world which one feels he would like to see once before he dies, so as an iris lover, there are various iris. For your Secretary, many of these desires are among the oncocyclus irises and the subject of this brief note is one. This note also can be nothing more than a note for it is no evidence of skill or care that has produced the flowering and no indication of future success.

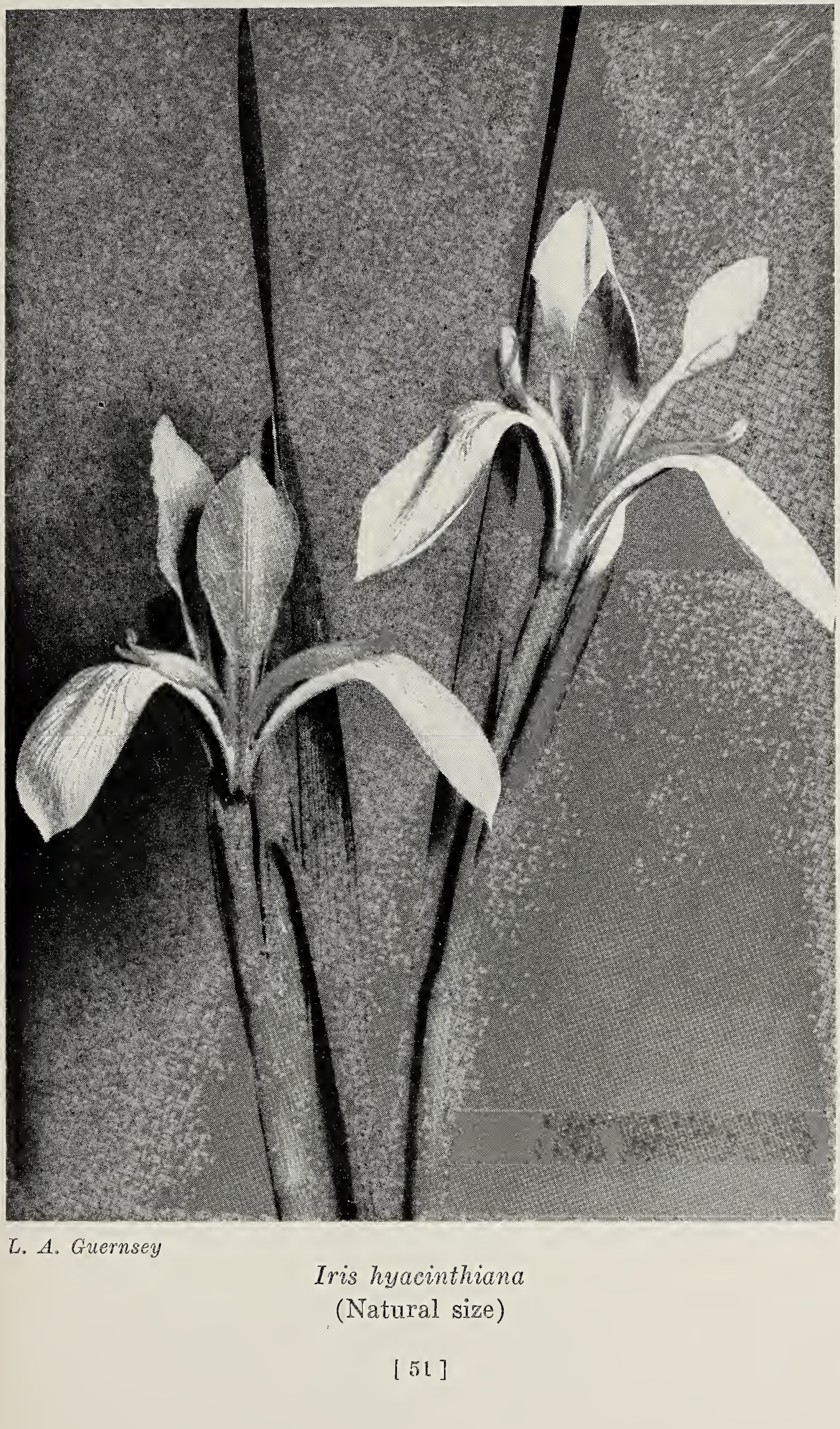
The large irregular, rather dull orange-colored rhizomes arrived late in November and were potted in a fairly rich soil mixture made gritty with sand. The pots were kept in a cool greenhouse for two weeks and then buried to the rim in a deep cold frame, in which, thanks to our severe winter, there was some freezing. With the turn of the year and the lengthening of the days, the vigorous shoots began to push up and finally the flowering—two flower stalks from five rhizomes.

The flowers are as large as any good sized bearded iris. The standards are nearly white, with a delicate tracing of the faintest pinkish lilac that gives them a pearly hue; the falls, a warmer white almost covered with a tracing and stippling of pinkish



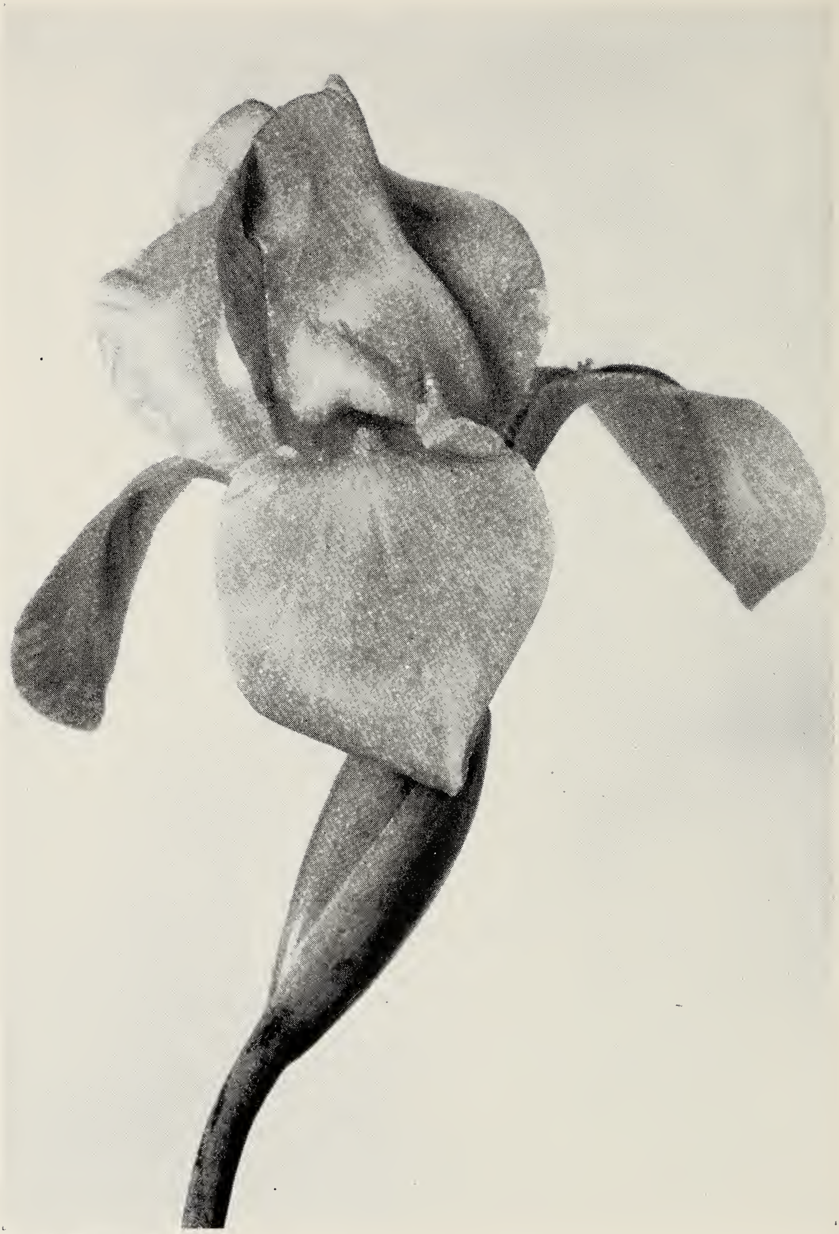
*L. A. Guernsey*

*Iris korolkowi concolor*
(Natural size)



L. A. Guernsey

*Iris hyacinthiana*
(Natural size)



*L. A. Guernsey*

*Iris Hoogiana*
(Natural size)

brown with a warm yellow tone underneath. The small signal patches on the falls are a velvety deep brown. The style branches are a warm pinkish brown.

The photograph shows clearly the form of the flowers but does not indicate that in this specimen there was only one flower to the stalk.

Remembering its charm, a later sight of the bearded iris, Seduction, makes one feel that if *Lorteti* refuses to flower again, one may have an approximation of its coloring in this charming plicata.

### *Iris Hoogiana* (See page 52)

This Regelia species is perhaps the most amenable to cultivation of all the species in the section, and while it is a most lovely thing, it does not suggest the usual Regelia iris, but rather an approximation of the form and coloring of some of the pallidas. In habit, of course, it follows its section with its tall, unbranched stem, its two-flowered head, the green valves, the self-colored beard.

For those who want to grow in their gardens at least one member of each botanical section, this will serve to represent Regelia in all those regions where a good summer baking must be given artificially if one wants the more exotic-looking species. Even if it lacks the strange venations, the metallic blendings of some of its relatives, it has a fine beauty of its own.

# OUR MEMBERS WRITE

*From Texas*

■ I am a rank amateur iris gardener and if, when I started in with roses, I had realized as I do now, how little I knew, I am sure I would never had had the courage to write about my experiences to the Secretary of the American Rose Society. By this I did learn, that no matter how little I know, there was someone who knew less and by telling my experiences, found it helped someone else. Then too, I have a little matter I would like to discuss with someone knowing irises very well.

I am wondering if the Society has ever tried to establish a permanent color chart that could be used by all growers, or would such a method prove practical? This is a method of color chart on the order of the one Mr. Schreiner has used for years. I have marked and catalogued my irises according to his color chart but as I obtained the newer varieties, I began to feel the need of a broader range of colors. In 1935 he changed his chart but I do not think it complete or adequate to cover the present range of colors nor will it take care of future color breaks. Would it be possible to get the iris growers to cooperate with the Iris Society in establishing a standard color chart? It would truly help the amateur. I am going to attach a color chart I have been working on but as I do not know iris is well as I should, I am sure it is not complete and can be greatly improved upon.

Now as to a few of the thoughts that have come through the past season. First, I want to express my surprise at the great interest shown for iris at the Nashville Meeting. I truly appreciate the great privilege of being a member of a society which has earnestly worked on the improvement of a already glorious flower. I have about four hundred and twenty-five varieties of irises but I saw many new ones the beauty of which I never dreamed. I have heard it said that the iris was the poor man's orchid but riches to me would mean one thing—that I could have all these new varieties.

I believe that the most outstanding yellow that is offered is Mr. Schreiner's Lucrezia Bori. I saw one not so tall but of a much richer color and yet not at all brassy or hard that I though was the Acme of Yellow in the iris, this iris I could not learn the name but it was growing in Mr. Washington's home garden under the number 101. Of course Dr. Kirkland's Copper Lustre was also a fine iris of a decidedly new color break. I was very much impressed with Mr. Clint McDade's iris he called Red Indian. Mr. Jacob Sass' Blackamoor pleased me very much. I have liked the dark deep colored iris and this one was a very fine smooth color. I believe it was at Mr. William's garden I saw an unusual colored iris, I took down the name as Barbarossa—this iris has a very deep tomato-colored beard and was very striking. Blue Triumph seemed to me as near a true blue as I have seen in an iris. Genevieve Serouge—I like this blending very much. Golden Hind was a good yellow and such a very rich-toned beard. I am sure it would be outstanding in the garden. Imperial Blush was a good pink but very much like Dog Rose as it bloomed in my garden.

By the way, Dog Rose was very beautiful this spring. Sent up three nice stalks on a first year plant and has a very unusual color growing pinker each day the bloom is open. It is one of the new iris I was very well satisfied with.

Going back to the iris I saw at Nashville. JEB Stewart seemed to me an improvement that some of the new ones are not. King Midas is all the catalogue says about it. Legend was a good dark iris which I liked very much. Lewellyn was a striking blue Siberian. I was disappointed in not being able to see more Siberian varieties. Missouri was a more brilliant blue than I have not seen before. Mary Senni. I gave this iris one mark of credit in the first garden I visited; in another garden, I gave it three good marks which means it was one of the best I had seen. Naronda, I marked 1-CC. (This after Mr. Schreiner's color method) and the double CC meant that it was very blue. I have not seen it listed in any catalogue and would like to have it, as all the iris called blue are anything but blue to me. I have been so disappointed in the blue iris I have bought. Prof. S. B. Mitchell received three good marks. Picador received four; in Mr. Clarence Connell's garden at Dauntless Hill, this iris was most striking. Red Dominion also received three marks and is a good red. Mr. Connell has a red seedling of Dauntless in his seedling bed at Dauntless Hill which was as near a clean good red as any of the so called reds. Spokane and Sequoiah are superior reds and they rate among some of the best I have seen.

There is such a wonderful improvement in the white class. I have always loved our lovely white ''flag'' especially as they so often bloom with the lilacs and are some of the first blooms of the spring I can use in the house. Some of these new stately whites

I would feel it a sacrilege to cut for they are never as beautiful as growing out among their own foliage.

There are many, many other irises that I gave one or two marks but it would be too much to mention those I liked particularly well. Those with the three marks were the ones that stepped right out in front.

Just a little of my amateur experience of growing iris in Texas. As in rose literature so in iris we have received most of our instruction from localities nortth and east, which receive a greater percentage of rainfall than does Texas. I find that iris must have a certain amount of artificial watering throughout our long summers. The second year of my planting, I lost some valuable plants by following the instructions of "they need the baking hot sun and little water." Last year and this present year, I have given them water about like I would treat well established shrubs. I have not lost a plant and they are growing beautifully. I also found that Iris transplanted after August 15th do as well if not better than those transplanted immediately after they bloom. Like Mr. McDade, I am quite intrigued with the fall blooming varieties. Several of my fall blooming varieties this year, bloomed in July; why? At the present writing, August 23rd, I do not have an iris in bloom and none show any tendency to bud. Maybe I am over anxious. I have one dark rich purple that will send up buds most any time, and the weather permitting, will bloom in mid winter. I have never learned the name of this variety. Another thing I have found that goes a little contrary to iris instructions is that they like fertile soil. I was compelled to discontinue a certain portion of my rose garden because it was to close to a large tree. This ground had been well fertilized for roses but in December, I decided to set back the rose bed 15 feet and to this edge of the rose garden I transplanted a number of the ordinary varieties. These plants have grown and produced better blooms than any of my other plants. The other iris have received lime at one period and bonemeal at another. I did not use barnyard fertilizer as I read in most catalogues, the statement it would cause iris to rot.

These are just a few of the things I have learned by actual experience in planting irises. I am sure they are all well known to practical iris growers but some amateur may gleam a little help from my experience.

HALLY BRADLEY HAMPTON.

The Color Chart follows on next page.—(ED.)

# IRIS COLOR CHART

In this space should be a well known variety as typical example of each color and type.

*Will members suggest varieties for all these spaces?*

1—A—White Selfs
1—B—Plicatas
1—C—Amoenas
1—D—

2—A—Lightest Blue
2—B—Medium Blue
2—C- -Dark Blue
2—D—Blue Bi-colors
2—E—Blends, blue predominate

3—A—Lightest Yellow
3—B—Medium Yellow
3—C—Dark Yellow
3—D—Yellow Bi-colors
3—E—Blends yellow predominate

4—A—Light Pink
4—B—Medium Pink
4—C—Darkest Pink
4—D—Pink Bi-colors
4—E—Blends Pink predominate

5—A—Red
5—B—Bright Red
5—C—Dark Reds
5—D—Bi-colors
5—E—Blends red predominate

6—A—Light Purple (Mauve)
6—B—Medium Purple
6—C—Dark Purple
6—D—Bi-colors
6—E—Blends mauve or lavender predominate
6—EE—Blends purple

—or—

For Blends another number could be used as follows:

7—A—Blends Blue predominate
7—B—Blends Yellow predominate
7—C—Blends Pink predominate
7—D—Blends Red predominate
7—E—Blends Purple predominate.

I believe you or some of the American Iris Society Judges could better fill in the variety for example. I surely would not attempt to do so. In these numbers and letters left open you could double the letter or add another letter to emphasize deeper color or a new color break

### *From California*

Your question of what can be done with or about a seedling that has come into the world minus side shoots or sprouts will offer the "Lost Chord" (picture enclosed a yellow self). It bloomed during the first week of April so I decided that to produce some growth I would stimulate it with an acid nitrogen fertilizer (Ammo. Phos.), and after pollenizing two flowers I removed the rest and gave it the works. It set one pod so knew that it would outlive a barren stalk but a question arose: Suppose the fertilizer was too strong and would burn? To prevent this, I kept the ground wet daily, put Redwood shakes around the plant so no sun would hit the rhizome and waited. When the pod ripened, by digging, I found a single shoot coming on the north side of the plant, but very deep. Both the shoot and rhizome are still alive and it remains to be seen if the shoot, when it blooms next year, will be as good as the first bloom. Although the lower branch had already been removed, the picture will do for comparison.

Due to the fact that soil, weather conditions, etc., enter in, do not publish this information, but try it out and if unsatisfactory remember that irises do funny things in California.

With apologies to Mr. Cluff, the note goes in with the hope that it will bring us, not criticisms, but notes from others on their methods, or their success with this.—Ed.

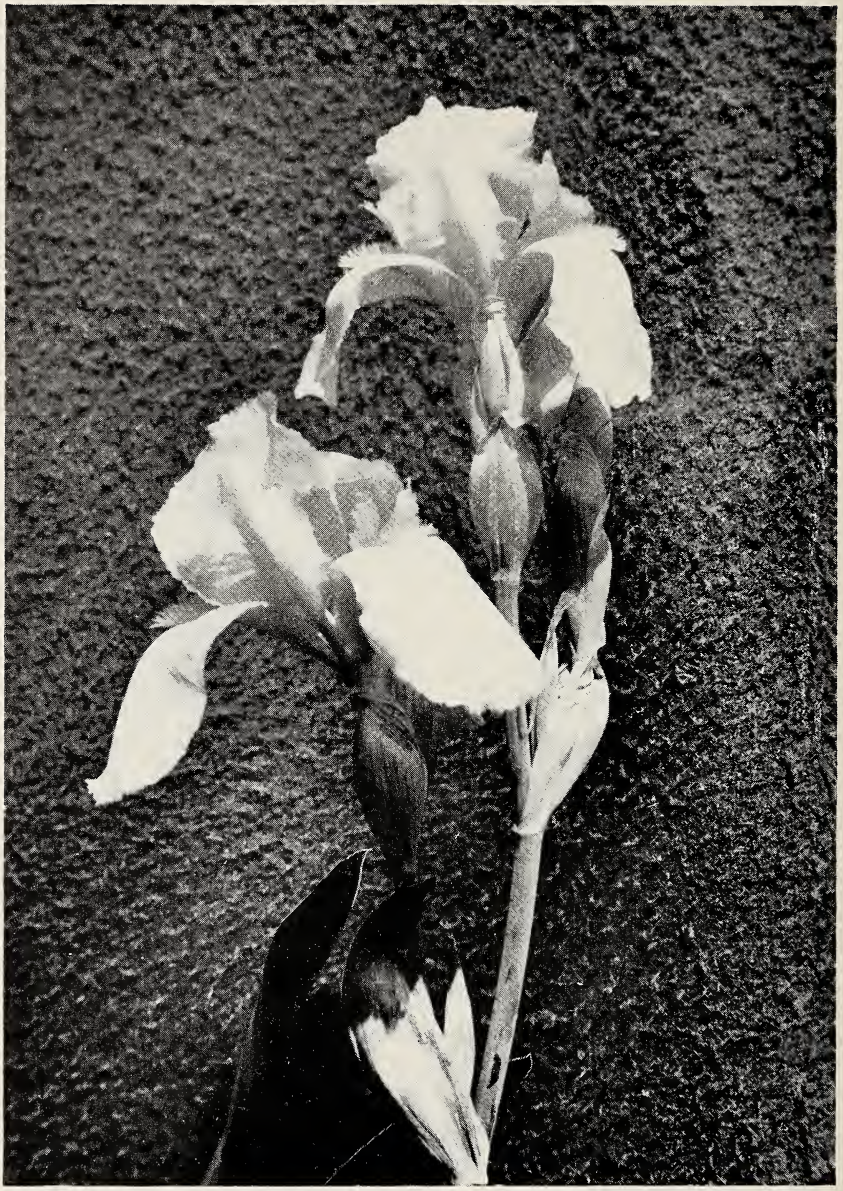
W. B. Cluff.

### *The Sash of Iris*

The word Iris is one used in two or three ways. In connection with Greek mythology Iris was worshiped as a messenger of the goddess Juno, Queen of the Heavens. She is usually pictured as a graceful maiden, winged and resplendent. The rainbow was closely associated with her, and poets pictures it as the path on which she ascended to the gods with messages from Olympus. Its sudden appearance meant that Iris needed it for a pathway—when the message was delivered it disappeared. Occasionally she is represented with a rainbow above her. Sometimes the rainbow is called the sash of Iris.

Alexander M. Ross.

*Canada*



*Iris, Lost Chord*

### *Concerning Records*

Winter time is a good time for the amateur iris breeder to go over the records, and reflect and contemplate on past performances of all kinds affecting the subject. An interesting occupation is tabulating the results of efforts to pollenize, and sort of weigh the abilities of the different varieties used as seed and pollen parents, respectively.

Here is a table of the writer's modest efforts, with some comment on what might be deduced from it. These are the observations of a ''greenhorn'' iris breeder, let it be understood, offered only for their general interest, and not as any scientific or authoritative exposition on any branch of the fascinating study of iris. To those wizards and creators of introduced varieties, and many students much more informed than the writer, there can be no doubt that the foregoing statement is superfluous. Undoubtedly there will be scores who will read the tabulations following and justly criticize many of the crosses attempted as ''durn-fool'' efforts anyway, because the varieties tried could not be expected to give any pleasing offspring, because inferior or of undesirable color or ancestry. Again, others undoubtedly qualified by their great skill, study and experience, such as Col. J. C. Nichols, for instance, could have told me before I ever attempted many of the crosses which failed, that the chromosome number of the varieties used were incompatible. The answer is: That's all I had to use and the only information I ever had about chromosome numbers is that contained in the excellent article by L. F. Randolph in the July, 1934, BULLETIN (No. 52, pp. 61-71).

Yet there may be some interest in these tabulations to other rank amateurs like myself, and I wonder, if a score or more such records were sent to one person for cumulation and publication, it would serve a useful purpose.

This table represents the result of only about 200 attempts at pollenization, using 82 varieties, and shows the result of using the named variety whether as seed or pollen parent, and with what other variety it ''hit'' or ''missed.''

I am deeply conscious that its value as an indicator of the potentialities of the several varieties tried is diminished by the small number of attempts. Is it necessary to add that, in the case of amateurs who must make a living at some other vocation, the work must often be done at unfavorable hours, when we really have no right to hope for success? But, it's often a case of do it then, or not at all.

The limiting condition, I think shows up, for instance, in the case of Nene, which when used as a seed parent, set seed to one pollenization by Pluie d'Or, and failed to another, while it served as a successful pollen parent *on* Pluie d'Or. In this case I'd feel rather sure that where Pluie d'Or missed on Nene it was not the inherent fault of the flower, but rather of the breeder.

And so, many of the misses reported might be misleading to a great extent, and if the pollenization had been done at a better time, positive results might have ensued. Yet, even the recorded and tabulated misses are of some value. Especially in a case like that of Tom Tit, one can at least say: "That fellow's difficult to pollenize" when he failed to set seed for five different pollen parents, constituting all the attempts made with it, and resulting in a 100 per cent failure. And look at what he missed for. There are Alcazar and Morning Splendor. Alcazar used six times as a pollen parent missed only on Tom Tit and Prospero, while hitting on eight others, and at that, Prospero wasn't so easy to hit either, being only a 25 per cent successful seed parent, and, incidentally, only a 50 per cent pollen parent.

Others show up real fertile and potential. For instance Aphrodite, succeeding to every one of five different varieties as a seed parent, and on three out of four varieties as a pollen parent, failing only on Dejah. And, when you look at Dejah's record, perhaps that isn't so bad for Aphrodite, because two others failed on Dejah, though one of them, Gold Imperial, did succeed in another attempt.

Eldorado seems to be another 100 per center, both ways, and with varieties apparently not so generally successful. Two hits, with Magnifica and Prospero, when used as a seed parent and two hits on Ballerine and B. Y. Morrison, when used as a pollen parent, seemingly make a good batting average. I wish I knew the chromosome count for all these five.

Look at Imperator; no misses, but a successful mamma six times and a successful papa twice.

Susan Bliss and Taj Mahal are two others that behaved well, while Esplendido was kind enough to set seed to Decennial and Tectorum and on White Queen.

Others, not as free of "misses," one knows must have some of their failures discounted for reasons already alluded to. Such are

Gold Imperial, Lona, Indian Chief, Nene and Pluie d'Or. I just wanted to use these varieties so much that there were times when I should not have tried.

Notice that Coronation × Nene made seeds with a chromosome count of 36 x 48 respectively. So did Nene (48) × Gold Imperial (24) and L. A. Williamson (50) × Gold Imperial (24) and Morning Splendor (48) × Gold Imperial (24).

The varieties 159-F, 179 and "Little Red," shown in the tabulations, are seedlings. 159 is (Taj Mahal × Lona) × Pluie d'Or and 179 is Gold Imperial × Lona, while "Little Red" is just a small but "Reddest" real red I know, whose breeding tag was lost.

Let me end on a different thought and question. Can pollen be collected and sent by mail, so as to be alive and effective three or four days afterward? I'd like to know the method. Wonder, if it were brushed off the stamens into a medicine capsule, it could be mailed say from Tennessee to New York. It occurs to me, that if this would work, we could arrange to send pollen of late bloomers North for use on early bloomers, in exchange for pollen of early bloomers for use here on late bloomers.

K. E. Steinmetz.

*Knoxville, Tenn.*

| | *As Seed Parent* | | *As Pollen Parent* | |
|---|---|---|---|---|
| | *Hit by* | *Missed by* | *Hit on* | *Missed on* |
| Abenda | Crusader | | Crusader | Georgia |
| Afterglow | Roseway | | Gold Imperial<br>Alcazar | Lord Lambourne<br>Tom Tit |
| Alcazar | Anne Leslie<br>Morning Splendor<br>Afterglow | Pluie d'Or | Aphrodite<br>Feronia<br>Gold Imperial<br>Imperator<br>White Queen | Tom Tit |
| Ambassadeur | Anne Leslie<br>Prospero | Mother of Pearl<br>Nene | | |
| Anna Farr | Aphrodite | | Seminole | Pal Tec |
| Anne Leslie | Feronia<br>Prospero | Prospero<br>Ballerine<br>Dream | Alcazar<br>Ambassadeur<br>Taj Mahal<br>Dream-2 | |

| | *As Seed Parent* | | *As Pollen Parent* | |
|---|---|---|---|---|
| | *Hit by* | *Missed by* | *Hit on* | *Missed on* |
| Aphrodite | Alcazar<br>Conchita-2<br>Imperator<br>Wyomissing<br>Susiana | | Anna Farr<br>Feronia-2<br>Wedgewood | Dejah |
| Asia | Dream<br>Gold Crest<br>Lona | Gold Crest | | Sunset<br>Gold Crest |
| Autumn King | | | Troost | Mrs. Alan Gray |
| Ballerine | Eldorado<br>Lohegrin | Pioneer | Seminole | Anna Farr<br>White Queen<br>Anna Leslie |
| B. Y. Morrison | Imperator | | | |
| Candlelight | Prospero | Dream | | Dream |
| Caprice | | | Mother of Pearl | |
| Carfax | Nene<br>"Little Red" | Pluie d'Or-2 | | |
| Celeste | Morning Splendor | | | |
| Col. Candelot | Dejah | | | |
| Conchita | | | Aphrodite<br>Lohengrin | |
| Coronation | Nene<br>Valencia | Freida Mohr | | Wm. Mohr<br>Virginia Moore |
| Crusader | Abenda<br>Iris King<br>Hespero | Anne Leslie<br>Her Majesty | Abenda<br>Col. Candelot<br>Susan Bliss | |
| Damozel | Decennial | | | |
| Decennial | | | Titan<br>Damozel | |
| Dejah | Gold Imperial | Aphrodite<br>Gold Imperial<br>Leverrier | Col. Candelot | |
| Dolly Madison | | | Pioneer | |
| Dream | Anne Leslie<br>Lona<br>Prospero<br>Susan Bliss | Candlelight<br>Iris King | Asia Long-2<br>Sunset | Candlelight<br>Anne Leslie<br>Sunset<br>White Queen |
| Ed Michel | L. A. Williamson<br>Morning Splendor<br>Taj Mahal | | Wyomissing | White Queen |
| El Capitan | | | Ramona | |
| Eldorado | Magnifica<br>Prospero | | Ballerine<br>B. Y. Morrison | |

| | *As Seed Parent* | | *As Pollen Parent* | |
|---|---|---|---|---|
| | *Hit by* | *Missed by* | *Hit on* | *Missed on* |
| Elsinore | | | Midgard | |
| | | | Shekinah | White Tectorum |
| Esplendido | Decennial | | | |
| | Tectorum | | White Queen | |
| Feronia | Alcazar | Lord Lambourne | Anne Leslie | |
| | Aphrodite-2 | | Gold Imperial | |
| | Sequoyah | | | |
| Freida Mohr | Lona-2 | Pluie d'Or-2 | | |
| | 159-F | Coronation | | |
| | | Lona-2 | | |
| Georgia | Gold Imperial | Afterglow | | |
| Gold Crest | | Asia | Asia | Mother of Pearl |
| | | Magnifica | | |
| | | Lord of June | Mad. Chobaut | Gold Crest |
| | | Mother of Pearl | Prospero | |
| | | | Gold Crest | |
| Gold Imperial | Afterglow | Nene | Asia | Asia |
| | Alcazar | Magnifica | Dejah | Crusader |
| | Feronia | | Georgia | Lord Lambourne |
| | Indian Chief | | Imperator | Magnifica |
| | Lona-2 | | L. A. Williamson | Sunset |
| | Morning Splendor | | Mildred Presby | |
| | | | Morning Splendor | |
| | | | Nene | |
| | | | Pioneer | |
| | | | Victory | |
| Her Majesty | | Taj Mahal | | Lord Lambourne |
| Hermosa | | Prospero | | |
| Imperator | Alcazar | | Aphrodite | |
| | Gold Imperial | | B.Y.Morrison | |
| | Indian Chief | | | |
| | Lona | | | |
| | Mad. Chabaut | | | |
| | Nene | | | |
| Indian Chief | Nene | | Gold Imperial | L. A. Williamson |
| | Gold Imperial | | Imperator | Majestic |
| | "Little red" | | Lord Lambourne | Pluie d'Or |
| | | | Seminole | Seminole |
| | | | Taj Mahal | Tenebrae |
| Iris King | | Mildred Presby | Crusader | Dream |
| | | | Le Correge | L. A. Wmson |
| | | | Taj Mahal | Morning Splendor |
| | | | | Mother of Pearl |

|  | As Seed Parent |  | As Pollen Parent |  |
|---|---|---|---|---|
|  | *Hit by* | *Missed by* | *Hit on* | *Missed on* |
| Innocenza | Morning Splendor |  |  |  |
|  | Lona |  |  | Tenebrae |
| LeCorrege | Taj Manal |  | Le Correge |  |
|  | Iris King |  |  |  |
|  | Le Correge |  |  |  |
| L. A. Williamson | Gold Imperial |  | Ed. Michel |  |
|  |  |  | Mother of Pearl |  |
|  |  |  | Seminole |  |
|  |  |  | Wyomissing |  |
|  |  |  | Taj Mahal |  |
| Leverrier | Conchita |  | Ballerine |  |
| Lona | Dream-2 |  |  |  |
|  | Nene |  | Asia | Ballerine |
|  |  |  | Imperator | Lord of June |
|  |  |  | Freida Mohr-2 | Magnifica |
|  |  |  | Gold Imperial | Mad. Chobaut |
|  |  |  | Morning Splendor | Ma Mie |
|  |  |  | Mother of Pearl | Mother of Pearl |
|  |  |  | Nene | Sir Michael |
|  |  |  | Pluie d'Or-2 |  |
|  |  |  | Taj Mahal |  |
|  |  |  | Wyomissing |  |
| Lord Lambourne | Indian Chief | Afterglow | Wyomissing | Feronia |
|  |  | Her Majesty |  | Lord of June |
|  |  | Tenebrae |  |  |
| Lord of June |  | Lord Lambourne |  | Midgard |
|  |  | Mary Gibson |  |  |
| Magnifica | Prosper Laugier | Gold Imperial | El Dorado | Gold Imperial |
|  |  | Lona | Susan Bliss | Gold Crest |
|  |  | Mad. Chobaut |  |  |
|  |  | Pioneer |  |  |
| Majestic |  | Indian Chief |  |  |
| Ma Mie | Morning Splendor | Seminole |  |  |
| Mary Gibson |  |  | Ramona | Lord of June |
| Midgard | Elginore |  |  |  |
| MildredPresby | Gold Imperial |  | Virginia Moore | Iris King |
|  |  |  |  | "Little Red" |
| Madame Chobaut | Roseway |  | Imperator | Magnifica |

| | *As Seed Parent* | | *As Pollen Parent* | |
|---|---|---|---|---|
| | *Hit by* | *Missed by* | *Hit on* | *Missed on* |
| Monsignor | Morning Splendor | | | |
| Morning Splendor | Gold Imperial-2 | Iris King<br>Nene<br>Pluie d'Or | Alcazar<br>Celeste<br>Ma Mie<br>Ed. Michel<br>Innocenza<br>Monsignor<br>Mother of Pearl-2<br>Taj Mahal | Tom Tit<br>Prospero |
| Mother of Pearl | Caprice<br>Gold Crest<br>L. A. Wmson<br>Lona<br>Morning Splendor | Gold Crest<br>Iris King<br>Lona<br>Roseway | | Ambassadeur<br>Tom Tit |
| Mrs. Alam Gray | | Autumn King<br>Prospero | | |
| Nene | Gold Imperial<br>Lona<br>Pluie d'Or | "Little Red"<br>"179"<br>Pluie d'Or | Coronation<br>Indian Chief<br>Imperator<br>Pluie d'Or<br>Taj Mahal<br>Valencia | Carfax-2<br>Gold Imperial<br>Ambassadeur<br>Morning Splendor |
| Paltec | | Anna Farr | | |
| Pioneer | Gold Imperial<br>Dolly Madison | | | Ballerine<br>Magnifica |
| Pluie d'Or | Lona-2<br>Nene-2 | Indian Chief<br>Valencia | Nene | Alcazar<br>Nene-2<br>Freida Mohr<br>Morning Splendor<br>Prospero |
| Prospero | Gold Crest | Pluie d'Or<br>Roseway<br>Morning Splendor | Ambassadeur<br>Anne Leslie<br>Candlelight<br>Dream<br>Roseway | Anne Leslie<br>Hermosa<br>Mrs. Alan Gray<br>Sunset<br>Tom Tit |
| Ramona | El Capitan<br>Mary Gibson | | Eldorado | |
| Roseway | Prospero | | Afterglow<br>Mad.Chobaut<br>Susan Bliss | Mother of Pearl<br>Prospero |

|  | As Seed Parent |  | As Pollen Parent |  |
|---|---|---|---|---|
|  | *Hit by* | *Missed by* | *Hit on* | *Missed on* |
| Seminole | Anna Farr<br>Ballerine<br>Indian Chief<br>L. A. Williamson | Indian Chief |  | Ma Mie |
| Sensation |  | Valencia |  |  |
| Shekinah | Elsinore | White Tectorum |  |  |
| Sir Michael |  | Lona |  |  |
| Sunset | Dream | Asia<br>Dream<br>Gold Imperial<br>Prospero |  |  |
| Susan Bliss | Crusader<br>Magnifica<br>Roseway |  | Dream |  |
| Susiana |  |  | Aphrodite |  |
| Taj Mahal | Anne Leslie<br>Ed Michel<br>Iris King<br>L. A. Williamson<br>Lona<br>Morning Splendor<br>Nene |  | Her Majesty<br>Le Correge |  |
| Tenebrae |  | Iris King |  | Lord Lambourne |
| Titan | Decennial |  |  |  |
| Tom Tit |  | Alcazar<br>Afterglow<br>Morning Splendor<br>Mother of Pearl<br>Prospero |  |  |
| Troost | Autumn King |  |  |  |
| Valencia | Nene |  |  | Pluie d'Or<br>Senation |
| Virginia Moore | Mildred Presby | Coronation |  |  |
| Wedgewood | Aphrodite |  |  |  |
| White Queen | Alcazar<br>Esplendido | Ballerine<br>Dream<br>Ed. Michel |  |  |
| Wm. Mohr |  | Coronation |  |  |
| Wyomissing | Ed. Michel<br>Lona<br>Lord Lambourne |  | Aphrodite |  |

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All of the dealers listed below are members of The American Iris Society. If you are buying iris for your garden, it should be your particular pleasure to make your purchases from the dealers who have worked with and supported your society. Your officers and directors invite your particular attention to this list. They also ask a favor. When you order, tell the dealer you saw his name in the Bulletin and do him a favor by not asking for a catalog unless you mean business.

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ALTHOUGH all readers of the Bulletin are supposed to know that the annual dues of the Society are three dollars payable by the calendar year, it has been called to our attention that there is a chance that someone who is not a member may read your copy and wonder how he too may become a subscriber. If you happen to be such a reader, let us assure you that the Society welcomes to membership all persons who are interested in iris who feel that special knowledge of iris would be welcome in their gardening.

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